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THE **CONTINENTALGROUP** REPORT:

TOWARD RESPONSIBLE GROWTH

Economic and Environmental Concern in the Balance

SPONSORED BY THE CONTINENTAL GROUP, INC.
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Preface

It is a rare business enterprise today that is not brought face-to-face with many of the environmental concerns of the country, including air and water pollution, forest management, litter, solid-waste disposal, and recycling. Certainly this is true of Continental Group and our particular mix of businesses—packaging, forest products, insurance, and energy.

With this exposure we have experienced firsthand the conflict between the preservationist perceptions of environmental activities and the "business as usual" philosophy of many industrial managers.

Since such differing viewpoints will necessarily be arbitrated by the public through its elected officials and judicial system, we concluded it was appropriate to test the understanding and sentiments of the general public, as well as environmental and business leaders, in order to judge in what manner the often conflicting goals of environmentalism and free enterprise might be resolved. The result was the study that follows.

Broadly the study concludes that there is strong public support for the attainment of both environmental and economic goals, with considerable understanding that the optimum actions will require compromises from each side. The study does not establish whether people's desire for most of the benefits of both environmentalism and free enterprise can in fact be realized and, if so, by what means. These questions can only be addressed over time with the help of further initiatives that generate more knowledge and understanding. The public's rapidly increasing awareness of the subtleties of both our environmental and economic problems gives hope that this process can lead to a sustainable society in which reasonable economic progress is possible within the natural limits of man's environment.

At Continental Group we recognize this process as "responsible growth." We believe that objective research, dialogue, mutual understanding, and compromise are the best ways to address the problems that jointly concern environmentalists and businessmen. We are delighted that this study confirms that there is widespread public support for this viewpoint.

We hope that its findings will also encourage many others in industry and the environmental movement to work together toward responsible growth for America.

BRUCE SMART
Chairman and Chief Executive Officer
Continental Group

Overview

The Continental Group Report: Toward Responsible Growth is the most comprehensive investigation ever conducted on how Americans are reacting to the dual objectives of economic progress and environmental protection. The survey draws on interviews with over 1300 members of the general public from across the nation, 263 top executives from large and small corporations, 343 members of major environmental advocacy groups, and in-depth conversations with scores of leaders and residents in five case-study communities.

The study discovers that Americans retain an enduring commitment to revitalizing our economy. This commitment is coupled with a sharp awareness that we live in a world with fragile natural balances that must be protected. The report presents compelling evidence that those who say the goals of economic development and environmental preservation are irreconcilable—be they leaders in government, business, or the environmental movement—are out of tune with public sentiment and out of tune with what is actually taking place in our nation's communities.

Preserving Economic Opportunity

The survey reveals that both economic and environmental considerations are in the forefront of public concern. Eight out of ten Americans (81%) believe that maintaining a strong national economy should have high priority on the national agenda. The report also demonstrates that seven out of ten Americans (70%) feel that they or their families have been hurt by the current economic situation. In such circumstances, Americans might be thought hostile to environmental protection measures that could place constraints on economic growth. We find this not to be the case, however. Seventy-seven percent (77%) of Americans assert that protecting nature should be a high priority.

The study finds:

- Seven out of ten Americans (69%) believe that anyone who works hard can get ahead in this country.
- Eight out of ten (79%) believe an incentive for private profit is essential for an economic system to function effectively.

- Seventy-two percent (72%) assert that the United States would *not* be better off if it moved toward socialism.
- The belief in the economic system appears to be based on our individual experience with it, for despite talk of a constricting economy, two-thirds of the public (66%) report their economic position is better than that of their families when they were growing up, and *zero percent* say their position is much worse.

Our firm belief in economic freedom might seem antithetical to a recognition of the need for environmental constraints, but on the contrary, the survey finds that six out of ten Americans (61%) think that pollution is one of the most serious problems facing the nation today, and large majorities express agreement with relatively new ideas about man's relationship to his environment:

- Eighty-four percent (84%) concur that the balance of nature is very delicate and easily upset by human activities.
- Seventy-six percent (76%) agree that the earth is like a spaceship with only limited room and resources.
- Seventy-nine percent (79%) believe we must prevent any type of animal from becoming extinct, even if it means sacrificing some things for ourselves.

When it is realized that not long ago such phrases as "spaceship earth" were virtually unheard of, these findings indicate our citizens are truly reassessing the role of the environment in our national vision. This contention is further supported by the surprising discovery that a solid majority of the public (72%) agree with the statement, "I feel American beliefs and values have been a basic cause of our environmental problems."

However:

- About two-thirds (64%) of the public do not feel that pollution really affects their daily lives.
- Twenty-nine percent of Americans (29%) believe that, compared with ten years ago, the quality of the environment has

improved, 28% believe the environment stayed the same, and 41% feel it has grown worse.

It is important to note that a majority of Americans believe pollution is a serious national problem. This sentiment seems to suggest that the environment is a manageable, enduring concern rather than a "crisis" issue.

A Mandate for Responsible Growth

Key findings contained in *The Continental Group Report* point to an emerging consensus: The public desires both economic revitalization and environmental protection, to be attained through a program of *responsible growth.*

Compared with the 81% who believe maintaining a strong economy is a top national priority, only 46% feel that maintaining a *high rate* of economic growth should be an equally important priority. And, similarly, 49% of the public say we must accept a slower rate of economic growth in order to protect the environment, as opposed to 24% who believe we should relax environmental standards to achieve growth and 24% who believe we can achieve both growth and environmental protection. On the more directly personal level, 68% of Americans think more stress should be placed on teaching people to live with basic essentials rather than on reaching a higher standard of living.

Such survey results show public desire for growth, moderated by quality-of-life considerations. This desire is echoed by other findings throughout the report.

Environmental Concern among the Business Community

The contents of public feeling revealed by the study run parallel to the sentiments of the business community to an unusual degree. Although according to stereotype, business executives might be expected to be uniformly antagonistic to environmental protection efforts, 52% of the heads of small corporations and 42% of top executives from among the FORTUNE 300 list of America's largest industrial corporations say they and their families benefit *substantially* from government's and environmentalists' efforts to protect the environment. Sixty-four percent (64%) of the public, by comparison, feel they derive substantial benefits from such efforts. Approximately one in ten executives—and an equal percentage of the public—

feel these efforts do not benefit them at all.

While popular conjecture might place executive opinion unfailingly in support of growth over environmental protection, the report discloses that executives assess trade-offs individually, often choosing environmental protection in numbers approximating the public's response:

- Fifty-nine percent (59%) of executives of small companies and 51% of executives of large companies agree there should be an emphasis on environmental cleanup even if companies have to charge more for their services and products rather than place an emphasis on keeping prices lower. Sixty percent (60%) of the public concur.
- In the area of land use, 50% of executives of small corporations and 47% of FORTUNE 300 executives believe we should leave parts of the country "untouched by man" rather than use whatever land is required to obtain the resources we need. Sixty-five percent (65%) of the public agree.
- Concerning automotive fuel, roughly three-quarters of small-business executives (74%), large-business executives (77%), and the general public (79%) say we should continue building only vehicles that use low-lead gasoline rather than permit production of vehicles that use lower-cost fuels that pollute more.

Only about one-third of business executives at small corporations (32%) and at large corporations (30%) believe we must relax environmental standards in order to achieve economic growth. The remaining two-thirds of both samples believe we can achieve the goals of protecting the environment and of economic growth simultaneously, or that we must accept a slower but positive rate of economic growth in order to protect the environment.

Environmental Advocacy Groups and the Business Community: Philosophic versus Pragmatic Goals

To illuminate the roots of conflict between the business community and environmental organizations and to discern potential pathways for increased communication between the two groups, the memberships of the Natural Resources Defense Council, Inc., Environmental Action, the Wilderness Society, and Nature Conservancy were surveyed.

The most striking discovery emerging from a comparison of executives and members of environmental groups is that both have clear, opposing visions of national priorities.

All but one of the priorities ranked most highly by business executives ("protecting freedom of speech") concerns a "pressing" problem such as fighting crime, building a strong defense force, maintaining a strong economy, and fighting rising prices. In contrast, among the environmental group membership, all but one of the highest-ranking goals (fighting crime) concern broader, philosophic aims for society, such as: protecting nature, progressing toward a less impersonal society, and moving toward a society that values ideas more than money.

Toward a Middle Ground

In almost every instance, the attitude of the American public toward economic and environmental concerns falls somewhere in between that of the business executives on the one hand and the environmentalists on the other. However, even where the three groups disagree, there is a tendency for the general public to more closely approximate the sentiment of the business community than the environmentalist movement. For example:

- 74% of business executives, 76% of the general public, and 94% of environmentalists agree that the earth is like a spaceship with very limited room and resources.
- 36% of business executives, 55% of the general public, and 87% of environmentalists support maintaining air pollution standards as they are even if some factories close as a result.

- 20% of business executives, 40% of the general public, and 77% of environmentalists want to preserve wilderness areas at all costs, instead of opening them up to timber harvesting.

A Favorable Atmosphere for Industry Initiatives

The survey findings suggest that there is presently a favorable atmosphere for industry initiatives that aim to strike a balance between economic and environmental goals.

Findings cited previously show the firm public support of the free enterprise system, and, relatedly, a solid aversion to government intrusion in the private sector. But not only, as shown in Chapter One, do solid majorities of the public believe that incentives for private profit are essential for a healthy economy and that government regulation of business does more harm than good, we also find that despite frequent media portrayals of industry as an "environmental villain," half of Americans (51%) feel that *current* pollution control measures have imposed unfair burdens on industry. Such belief in American industry, and such unexpected willingness to identify with the plight of industry in meeting environmental regulations, show that industry initiatives would be far more palatable to the public than to rely on government regulation.

Divergent Perspectives on Growth among the Public

The report documents that most Americans favor a balancing of economic and environmental goals. It is, however, important to document that there are subgroups within our society—some of which place an emphasis on growth and some on protecting nature. The size and nature of such groups determine their considerable impact on public thought and policy making.

The report reveals that the American public possesses a wide range of views on growth. At one end of the Growth Orientation Continuum are those with a *utilization* perspective who tend to place a higher priority on the use of available natural resources; at the other end are those with a *preservation* outlook who tend to place higher priority on conserving the earth's resources.

There are three major predictors of growth orientation. The first is *age*, although not in the way that prior commentaries have led us to expect. Predictably, older Americans tend toward the more traditional utilization growth orientation: thirty-five percent (35%) of those 65 and over are at the utilization end of the growth continuum, compared with only 10% of Americans 18 to 34. There is evidence, however, that the preservationist orientation is not a faddish belief on the part of the young that is left behind automatically as Americans enter middle age, but is instead an outlook that apparently has remained with a large segment of the population since the emergence of the environmental movement in the sixties.

One-third (32%) of Americans 18 to 34 lean toward the preservationist point of view, and about one-quarter (27%) of those 35 to 49. For people 50 and over, who were not exposed to the influence of the environmental movement in their early years, belief in the preservationist ethic drops sharply. We find only 14% of those 50 – 64 and 8% of Americans over 65 classifiable as preservationists.

The second factor with a dramatic impact on growth orientation is education:

- Four out of ten (39%) college graduates tend toward a preservation orientation, compared with only about one out of ten (8%) of those with an eighth-grade education or less.
- Conversely, 37% of those with an eighth-grade education or less lean toward a utilization growth orientation, compared with 14% of college graduates.

Religious commitment is the third factor revealed to be strongly related to placing priority on resource utilization, with an equally strong inverse relationship to preservation. In examining patterns of religious practice, we find that:

- Those with greater affinity for the utilization perspective are more likely to attend religious services than are those with a preservation growth orientation (59% vs. 41%).
- The utilizers are far more likely than the preservers to encourage others to turn to religion (46% vs. 17%).
- The utilizers are significantly more inclined to read the Bible (47% vs. 24%).

The Impact of Growth Orientation on National Policy and Lifestyles

The philosophic differences between those with a utilization outlook and those with a preservation orientation have little meaning unless they have a discernible impact on our attitudes about national issues and everyday matters. That they do have such an impact on national policy is readily apparent from the study's findings on a range of critical economic/environmental and lifestyle trade-off questions.

- Americans with a preservation orientation toward growth are more likely than those inclined toward the utilization perspective to believe we should not relax environmental regulations in order to allow production of more energy (66% vs. 46%).
- Preservers are considerably more likely to feel we should stop the construction of nuclear - power plants (70% vs. 50%).
- Resource utilizers are more likely than preservers to favor increased energy production over conservation (45% vs. 20%).
- As consumers, utilizers are more likely than preservers to value the products of modern technology. For example, when considering the importance of the automobile in American life, 75% of utilizers rank cars "very important," as compared with 50% of preservers.

Points of Convergence

Although there are important points of difference between Americans with different growth orientations, there are equally important points of convergence which unite Americans, no matter what orientation toward growth they may hold. The survey shows convincingly that both resource preservers and utilizers are in clear accordance on the durability of fundamental American values. While the preservation ethic might be thought to be associated with such "counterculture" values as hostility toward capitalism, the vilification of technology and the out-and-out rejection of economic growth, the data disprove these assumptions.

- Regarding a belief in capitalism, there is nearly overwhelming agreement between preservers (88%) and utilizers (85%) that an incentive for private profit is necessary for an economic system to function effectively. Additionally, there is strong concurrence by both preservers (75%) and utilizers (79%) that the United States would *not* be better off if it moved toward socialism.

- Regarding belief in technology, preservers (81%) and utilizers (80%) show strong support for the statement "through science and technology we can continue to raise our standard of living." And the clear majority of preservers (70%) and utilizers (78%) agree that most problems can be solved by applying more and better technology.

- And on the subject of growth, in rating eleven goals for their communities, "controlling growth" was given the highest priority by only 14% of the preservers and 15% of utilizers.

Thus the report explains that both utilization and preservation co-exist with many basic American values while exerting a clearly discernible force on other beliefs. Our findings suggest that American outlooks on growth will be clearly manifested through *responsible* progress and *quality*, not quantity, as a measure of true growth.

Community Response to Growth Priorities

As part of *The Continental Group Report: Toward Responsible Growth*, in-depth, on-site interviews were conducted in five communities:

- Smyrna, Tennessee
- Phoenix, Arizona
- Columbus, Ohio
- Montpelier, Vermont
- Seattle, Washington

The purpose of these investigations was to go beyond statistical data and to determine how individual communities are meeting the challenge of responsible growth.

The results of the in-depth investigation of the five communities illustrate the human character of change on the local community level. In each community, even those where no-growth sentiment has traditionally abounded, both leaders and the public express a strong commitment to furthering economic growth, yet at the same time maintaining a traditional quality of life. Just as various segments of the general public differ in their attitudes toward economic growth, so too some regions have more of a utilization outlook, while others have more of a preservation outlook. For example, we find that thirty-four percent (34%) of residents of the Middle South embrace a utilization perspective on growth, compared to 12% of those in the New England and 14% of those in the Pacific region. Similarly, 37% of those in cities of one million or more are preservers compared with 21% of those in rural areas.

These varied orientations are evident in the distinctive outlooks of the five communities. The interviews conducted provide insight into how economic/environmental trade-off dilemmas are debated and resolved in communities across the nation. Furthermore, we find attitudes toward growth exert a profound influence on a broad spectrum of local priorities, determining how citizens and leaders achieve a balance between the dual imperatives of economic and environmental concern.

Chapter One

Economic Revitalization and Environmental Responsibility: Toward a New Balance

We ought to pursue the right kind of highly targeted economic growth very, very vigorously. We have a precious quality of the environment we want to maintain. It isn't a question of balance between environmental protection and development being a good thing – it's the *only* thing.

RICHARD A. SNELLING
Governor of Vermont

Introduction

Across the country, from Seattle to Smyrna, Tennessee, from Phoenix to Columbus, Ohio, there are signs of an emerging consensus on the dual imperatives of economic revitalization and environmental protection. This nationwide study of over 1300 members of the general public, 263 executives of large and small corporations, 343 members of environmental groups and five case study communities discovers that Americans retain an ardent commitment to preserving economic opportunity in our nation. This commitment, however, is placed in a new context—the context of a finite world with fragile natural balances that must be protected.

These two imperatives have often been regarded as being at odds with each other. It is impossible, say many observers, to give equal weight to development and environmental considerations—one or the other must take precedence. But this study provides solid evidence that those who say these goals are irreconcilable—be they leaders in government, business or the environmental movement—are out of tune with public sentiment, and, as our case studies illustrate, they are out of tune with what is actually taking place in many of our nation's communities.

Throughout this report, our findings suggest the public does not consider economic development and environmental conservation to be mutually exclusive. Instead we find large percentages of Americans support *both* concerns. For example, eight out of ten Americans (81%) feel that maintaining a strong economy should be a high priority on the national agenda; a nearly equal percentage (77%) assert that protecting nature should be a high priority.

Table 1.1: Strong Economy and Protecting Nature

	General Public: Percent Ranking as High Priority	Number of Respondents
	%	
Maintaining a strong economy	81	(1310)
Protecting nature from being spoiled and polluted	77	(1310)

The Limitlessness of Opportunity

An exploration of American attitudes toward economic opportunity is the key to an understanding of the new public emphasis on environmentally responsible approaches to development.

The survey reveals that seven out of ten Americans (70%) feel that they or their families have been hurt by the current economic situation.

Table 1.2: Current Economic Situation

Do you feel you or your family has been hurt by the current economic situation?

	%
Yes	70
No	29
Don't know	1
(Number of respondents)	(1310)

In an era of such widely perceived economic stress, it would be easy to conclude that Americans would have a severely diminished sense of individual and collective opportunities for advancement. Also, in such circumstances, it would be logical to assume that Americans would give little consideration to environmental protection measures that could place constraints on economic growth. The survey results, however, show the public retains a firm faith in the limitlessness of opportunity, in the resources of the individual and in the resilience of the free-enterprise system.

The fervent belief of Americans in their personal resourcefulness is confirmed by several findings. Seven out of ten (69%) believe that anyone who works hard can get ahead in this country. This optimistic outlook emerges, our data show, from individual experiences within our economic system. Despite talk of a constricting economy, two-thirds of the public (65%) report that their economic position is better than that of their families when they were sixteen years old; 21% say their position is the same; 12% say their position is somewhat worse; and *zero percent* say their position is much worse. Furthermore, 63% of Americans assert they have had a fair opportunity to make the most of themselves in life, compared with 36% who feel they have been held back in some way.[1]

Table 1.3: Personal Resourcefulness

Anyone who works hard can get ahead in this country:

	%	
Strongly agree	42	69
Somewhat agree	27	
Somewhat disagree	18	30
Strongly disagree	12	
Don't know	1	
(Number of respondents)	(1310)	

Do you think:	%
You have had a fair opportunity to make the most of yourself in life, or	63
Have you been held back in some ways?	36
Don't know	1
(Number of respondents)	(1310)

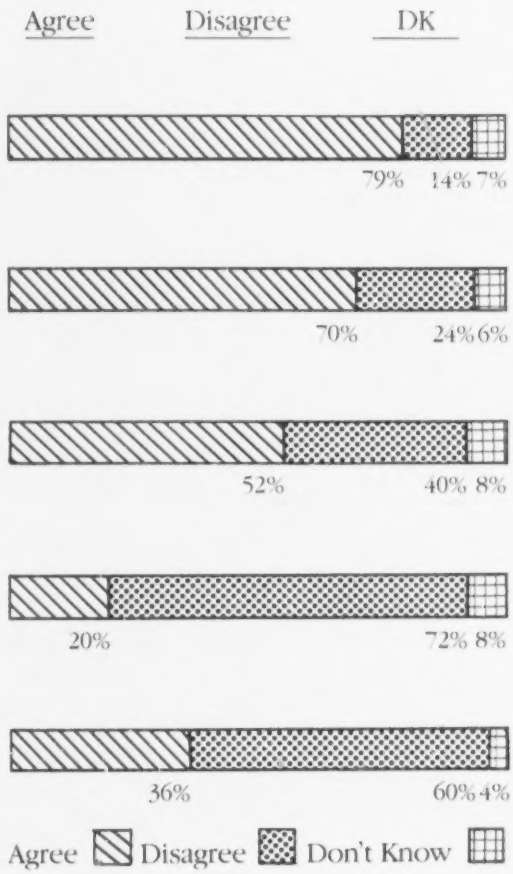
How would you compare your present economic position to that of your family when you were sixteen years old?

	%	
Much better	38	65
Somewhat better	27	
About the same	21	
Somewhat worse	13	
Much worse	0	
Don't know	1	
(Number of respondents)	(1310)	

1. Other observers have noted that social, as well as economic, advancement is a part of the modern American heritage. As Seymour Martin Lipset notes, "American research clearly indicates that elite positions have become much more open over time...and the rate of movement to the top from socially inferior origins has increased." "Social Mobility in Industrial Societies," *Public Opinion*, June/July 1982, p. 42.

It is clear that not only do most Americans believe that the American economic system offers "open opportunity," but there is also emphatic support for the notion that an incentive for private profit is necessary for an economic system to function efficiently (79%). There is substantial agreement (72%) that the United States would *not* be better off if it moved toward socialism. Seven out of ten members of the public (70%) believe that government regulation of business does more harm than good, and a majority (60% vs. 36%) *disagree* that the profits of big business should be controlled by government. The public also concurs (52% to 40%) that the less government has to do with the economy, the better off the country will be.

Table 1.4: Free Enterprise



An incentive for private profit is necessary in order for an economic system to function effectively.	79% 14% 7%
Regulation of business by government usually does more harm than good.	70% 24% 6%
The less the government has to do with the American economy, the better off the country will be.	52% 40% 8%
The United States would be better off if it moved toward socialism.	20% 72% 8%
The profits of big business should be controlled by government.	36% 60% 4%
Number of respondents (1310)	Agree / Disagree / Don't Know

Against this background of public commitment to the American enterprise system, a diminished role for government and confidence in the private market, we would expect that environmental concern might play a secondary role. What we find, however, is that there is a clear willingness to accept the premises of environmental constraints.

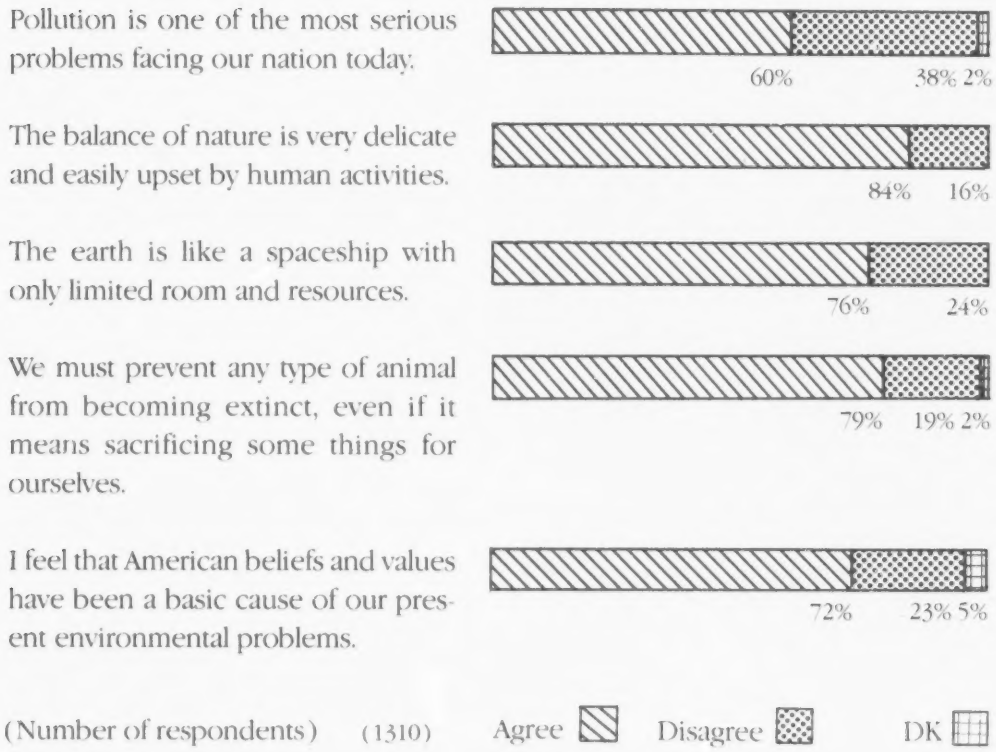
Concern for Environmental Protection

There can be no doubt that there is sharp public concern for the environment. Six out of ten Americans (60%) think that pollution is one of the most serious problems facing the nation today. Even more significantly, the study uncovers signs that new ideas about man's relationship to his environment have entered the public consciousness. These ideas have important implications for the public sector. As we shall see, environmental issues are not a critical concern in respondents' personal lives.

An overwhelming 84% of the public agree that the balance of nature is very delicate and easily upset by human activities.

There is similarly emphatic agreement (76%) that the earth is like a spaceship with only limited room and resources. And 79% of Americans believe that we must prevent any type of animal from becoming extinct, even if it means sacrificing something for ourselves.

Table 1.5: Public Concern for the Environment


Pollution is one of the most serious problems facing our nation today.
60%
38%
2%
The balance of nature is very delicate and easily upset by human activities.
84%
16%
The earth is like a spaceship with only limited room and resources.
76%
24%
We must prevent any type of animal from becoming extinct, even if it means sacrificing some things for ourselves.
79%
19%
2%
I feel that American beliefs and values have been a basic cause of our present environmental problems.
72%
23%
5%
(Number of respondents) (1310)
Agree
Disagree
DK

Later chapters will detail the increasing salience of environmental issues to discussions of sustainable growth, but the handful of findings cited above serve to signal an important aspect of our contemporary national outlook. When it is realized that not long ago such phrases as "spaceship earth" were virtually unheard of, and that Americans throughout their history have viewed nature as a frontier to be conquered, the extent of our acceptance of these environmentalist points of view is noteworthy.

That our citizens are truly reassessing the role of the environment in our national vision is underscored by the surprising agreement by a solid majority of the public (72%) that "American beliefs and values have been a basic cause of our environmental problems." What we may indeed be witnessing is a tempering of the traditional American frontier spirit—braving and conquering nature and asserting man's dominance over the natural world.

Preserving Opportunity and Environment: An Imperative for the 1980's

Americans remain clearly committed to a belief in the open opportunities offered by our economic system. Just as clearly, they show their belief in the importance of environmental constraints. How are we as a nation reconciling these beliefs in our own minds, and how are they being reconciled in our communities and in the national policy arena? Several key findings point to a public consensus on a new philosophy of responsible growth.

We have seen that 81% of the public (Table 1.1) think maintaining a strong economy should be a high national priority. But in examining responses to questions that focus more specifically on *growth*, we find the public does not wish to seek the attainment of a strong economy through indiscriminate growth. Rather, moderate, environmentally sound growth appears the order of the day (see Table 1.6).

Asked to think about encouraging new housing and industry in their own communities, a majority of the public (60%) feel that their communities ought to continue to grow. But in contrast to the 81% who believe maintaining a strong economy is a top priority, we find only 46% feel that maintaining a *high rate* of economic growth is a high priority. Similarly, 49% feel we must accept a slower rate of economic growth in order to protect the environment, as opposed to 24% who believe we can achieve growth and environmental protection at the same time and 24% who believe we should relax environmental standards to achieve economic growth. And on the more directly personal level, we find 68% of Americans think more stress should be placed on teaching people to live more with basic essentials, rather than on reaching a high standard of living.

Table 1.6: Economic Growth and Environmental Concern

Thinking about new housing and inviting new industry to your community, do you feel that your community:

	%	Number of Respondents
Ought to continue to grow	60	
Should not continue to grow	38	
Don't know	2	(1310)

	General Public Percent Ranking as High Priority	
	%	
Maintaining a strong economy	81	(1310)
Maintaining a high rate of economic growth	46	(1310)

Please tell me which statement you agree with the most:

	%	
We can achieve our current goals of environmental protection and economic growth at the same time	24	
We must relax environmental standards in order to achieve economic growth	24	
We must accept a slower rate of economic growth in order to protect the environment	49	
Don't know	3	(1310)

Table 1.6: *(continued)*

Do you think more stress should be put on:

	%	Number of Respondents
Teaching people to live more with basic essentials	68	
Reaching a higher standard of living	28	
Don't know	4	(1310)

These findings point to a public perception that while we seek a revitalized economy with open opportunity for all, this is to be balanced against environmental preservation. Just as we cannot afford a paralyzed economy, so we cannot afford economic recovery measures which recklessly impinge on the environment. The study's findings suggest that the mandate of the American people is for the economic approach described by Harlan Cleveland and Thomas W. Wilson, Jr.:

> It is not an alternative *to* growth we need, but new alternatives *for* growth we must identify, analyze and select... If "growth," as a modern society's organizing principle, is indiscriminate, and "no-growth" is neither necessary nor acceptable, then the alternative is selective growth, purposeful growth, growth "as if people mattered."[2]

The next several chapters will describe how this desire for "purposeful growth" is manifest in the national policy arena across all groups of Americans, and in local communities across the nation. The collected data show that the twin objectives of revitalizing the economy and safeguarding the environment are becoming increasingly integrated in decision making at the local and national levels. One reason for this, the study reveals, is that there is no longer a need to convince the

2. Harlan Cleveland and Thomas W. Wilson, Jr., *Humangrowth: An Essay on Growth, Values and the Quality of Life* (Princeton: Aspen Institute for Humanistic Studies, 1978), pp. 8-9.

public and policy makers of the need for environmental protection; therefore, discussions between government, industry, environmentalists and the public are proceeding under several commonly accepted premises that reduce the potential for conflict and increase the likelihood of practical, reasoned dialogue. A second reason is that along with an ever-broadening acceptance of environmental protection as a necessity, there is a concurrent acceptance of the notion that the environment is no longer a "crisis" issue. Rather, protecting the natural world is widely perceived as a *management* issue. Viewed as a manageable problem rather than as a crisis, the matter of preserving the environment becomes less conducive to confrontation and polarization.

From a Crisis Issue to a Management Issue

As can be seen from Table 1.7, the reduction of air and water pollution was considered a far more urgent national priority in April 1970—the time of the first Earth Day—than it was ten years later.

The present survey shows even more clearly that although the public is deeply concerned about pollution, the environment is not viewed as a crisis issue. While the survey has found that a majority of Americans consider pollution one of our nation's most serious problems (Table 1.5), further probing shows that such public response is reflective of a belief in the importance of environmental *watchfulness*, rather than a belief that the environment is actually critically endangered.

Table 1.7: Ranking of National Problems[3]

First, I would like to ask you which *three* of these national problems you would like to see the government devote most of its attention to in the next year or two?

	April 1965[4]	April 1970	Jan.-Feb. 1980[5]	Change 1965-1980
	%	%	%	%
Reducing the amount of crime	41	56	61	+20
Reducing unemployment	35	25	48	+13

Table 1.7: *(continued)*

	April 1965[4]	April 1970	Jan.-Feb. 1980[5]	Change 1965-1980
	%	%	%	%
Conquering "killer" diseases	37	29	41	+4
Improving public education	45	31	35	-10
Helping people in poor areas	32	30	29	-3
Reducing pollution of air and water	17	53	24	+7
Improving housing and run-down neighborhoods	21	27	20	-1
Reducing racial discrimination	29	25	13	-16
Improving highway safety	18	13	7	-11
Beautifying America	3	5	5	+2
(Number of respondents)	(1500)	(1500)	(840)	

About two-thirds of the public (64%) do not feel that pollution is affecting their personal life (Table 1.8).

Consistent with this majority response, we find a majority of Americans feel that compared to ten years ago, the quality of the environment has improved or stayed the same (57%); however, a sizable minority (41%) feel it has grown worse. This view is echoed by the majority of environmental activists. Among members of the

3. Council on Environmental Quality, *Public Opinion on Environmental Issues: Results of a National Public Opinion Survey* (Washington, D.C.: Government Printing Office, 1980), p. 7.

4. Data for 1965 and 1970 are from Gallup surveys. The Gallup 1970 survey was taken immediately after the first Earth Day.

5. Resources for the Future survey. The number of cases is smaller than the total (N=1576) because the question was asked of only a subsample.

National Resources Defense Council, Environmental Action, The Wilderness Society and Nature Conservancy, 50% feel the environment has improved or stayed the same, while 46% feel the quality of the environment has deteriorated.

Table 1.8: Environmental Perceptions

Thinking now about your own activities, do you feel that:

	General Public
	%
Pollution is affecting your life or	35
Pollution is not really affecting your life	64
Don't know	1
(Number of respondents)	(1310)

Compared to 10 years ago do you feel the quality of the *environment* in this country has:

	General Public	Environmentalists
	%	%
Improved	29	33
Stayed the same	28	17
Grown worse	41	46
Don't know	2	4
(Number of respondents)	(1310)	(343)

The recounting of such findings is not intended to suggest that the public's concern for the environment has faded. While specific concern with pollution has receded as environmental groups, government and private enterprise have responded to the problem, later chapters of this report will show that concern for the earth and its natural systems has become an integral part of our national outlook in the 1980's. As Robert Mitchell, of Resources for the Future, observes, "Environmental issues seem to have become an enduring social concern, much like health care, education, and other basic issues."[6] And as such an enduring concern, Americans demand prudent management of our resources in what we have increasingly come to realize is a finite and fragile world.

Table 1.9: The Administration and the Environment

How much confidence do you have that the Reagan administration will provide sufficient protection for our natural environment?

	%
A great deal	13
Some	42
Little	23
None at all	19
Don't know	3
(Number of respondents)	(1310)

Effectiveness in meeting this demand for responsible stewardship of our resources appears likely to be of continuing importance in public assessment of government performance. In regard to the present administration, 55% of the public has a "great deal" or "some" confidence that it will provide sufficient protection for our environment; 42% have little or no confidence that the administration will provide adequate environmental protection.

6. From *Public Opinion on Environmental Issues*, p. 200.

Chapter Two

The Business Community and Environmentalists: Fostering a Consensual Approach

> It is said that we must abandon economic freedom because our frontier is closed: because our biosphere is strained, because our resources are running out, because our technology is perverse, because our population is dense, because our horizons are closing in... But quite to the contrary, these problems and crises are in themselves the new frontier, are themselves the mandate for individual and corporate competition and creativity.
>
> GEORGE GILDER
> "Prometheus Bound," *Harper's*, September 1978, pp. 35-42.

Introduction

Reporting in our nation's magazines and newspapers has highlighted heated confrontations between the current administration and environmentalists over air and water quality standards, land use, and preservation of wildlife. But these widely reported controversies have obscured a more subtle—and potentially more significant—trend in environmental policy. Business executives demonstrate an unexpected similarity with the general public concerning the relative merits of environmental protection and economic growth. Behind the scenes there appears to be a quiet transformation of the positions and perceptions of the business community regarding environmental matters. Beyond this, our survey of businessmen and environmentalists points to ways to increase the common ground between both groups, and to foster consensual, rather than conflictual, approaches to policymaking.

Environmental Concern among the Business Community

The business community is often portrayed as uniformly antagonistic to environmental protection measures. The survey data illustrate the falsity of this perception.

In order to survey a broad spectrum of executives, two samples were drawn from the business community: chief executives of corporations with sales of $15 to $50 million[1] and top executives from the 268 largest corporations among the FORTUNE 300 list of the nation's leading industrial companies. The responses of both groups show an unexpectedly high degree of concern and sympathy for environmental matters.

The survey finds that 64% of the public believe that they and their families derive substantial benefit from efforts by environmental groups and the government to protect the environment. Although according to the stereotype, business executives might be expected to deny the value of environmental protection efforts, we find that 52% of the heads of small corporations and 42% of executives of large corporations say they feel they and their families benefit substantially from government's and environmental groups' efforts. Surprisingly, only about one out of ten executives—and an equal percentage of the public—feel they do not benefit at all by environmental protection efforts.

1. These are small businesses, as defined by the Heller Institute on Small Business.

Table 2.1 Environment and Personal Activities

How much do you feel *you and your family* benefit from the efforts of people—whether they be in environmental groups or the government—to protect the environment?

	A Great Deal	Some	Little	Not At All	Don't Know	(Number of Respondents)
	%	%	%	%	%	
General public	20	44	24	10	2	(1310)
Top executives/ Small corporations	10	42	38	9	1	(177)
Top executives/ Large corporations	5	37	50	8	0	(86)

Thinking now about your own activities, do you feel that:

	Pollution Is Affecting Your Life	Pollution Is Not Really Affecting Your Life	Don't Know	(Number of Respondents)
	%	%	%	
General public	35	64	1	(1310)
Top executives/ Small corporations	42	57	1	(177)
Top executives/ Large corporations	35	62	3	(86)

It is also interesting to note that while the majority of executives and the public do not feel pollution affects their daily lives, the number of executives who *do* sense pollution has an impact on their lives is as great as among the public as a whole. Forty-two percent (42%) of executives of smaller companies, 35% of executives of large corporations, and 35% of the public feel that pollution affects their everyday lives.

We find further surprises in executive response to a range of economic/environmental trade-off statements. While popular conjecture might place executive opinion soundly and consistently on the side of advocating economic growth over environmental concern, we find businessmen to be highly flexible in their views. Far from demonstrating "knee-jerk" progrowth responses, executives today are

assessing trade-offs individually and in many cases support the environmental protection option as often as the general public.

We discover, for example, that businessmen are just about as likely as the public to agree that there should be an emphasis on environmental cleanup even if companies have to charge more for their services and products. Sixty percent (60%) of the public favor putting environmental cleanup first, as do 59% of executives of small companies and 51% of executives of large companies.

In the area of land use, we find that 65% of the public believe we should leave parts of the country "untouched by man" rather than use whatever land is needed to obtain the resources we need. Fifty percent (50%) of executives of smaller corporations and 47% of FORTUNE 300 corporation executives concur that parts of the country should remain untouched.

In the area of transportation, about three-quarters of the public (79%), small-business executives (74%), and large-business executives (77%) believe we should not permit production of vehicles that use lower-cost polluting fuels. Six out of ten (60%) of the public favor funds for public transportation systems over funds for highways used by private vehicles, compared with 56% of executives from small companies and 69% of executives from large corporations.

Table 2.2: Trade-off Questions[2]

In the area of environmental cleanup: An emphasis on environmental cleanup first, even if the companies have to charge more for their products and services.

	Percent Agreeing	(Number of Respondents)
	%	
General public	60	(1310)
Top executives/ Small corporations	59	(177)
Top executives/ Large corporations	51	(86)

2. See Appendix for full table.

Table 2.2: *(continued)*

In the area of land use: Leave parts of our country in their natural states, untouched by man.

	Percent Agreeing %	(Number of Respondents)
General public	65	(1310)
Top executives/ Small corporations	50	(177)
Top executives/ Large corporations	47	(86)

In the area of automotive fuel: Continue to build vehicles that use only low-lead gasoline, reducing air pollution.

	Percent Agreeing %	(Number of Respondents)
General public	79	(1310)
Top executives/ Small corporations	74	(177)
Top executives/ Large corporations	77	(86)

In the area of transportation: Funds for public transportation systems like buses, subways, or railroads.

	Percent Agreeing %	(Number of Respondents)
General public	60	(1310)
Top executives/ Small corporations	56	(177)
Top executives/ Large corporations	69	(86)

Table 2.3: Jobs, Energy, and the Environment[3]
In the area of environmental protection and jobs: Maintaining air pollution standards as they are even if some factories close as a result.

	Percent Agreeing	Number of Respondents
General public	55%	(1310)
Top executives/ small corporations	39%	(177)
Top executives/ large corporations	34%	(86)

In the area of energy production: Maintain environmental protection regulations even if it slows the production of energy.

	Percent Agreeing	Number of Respondents
General public	56%	(1310)
Top executives/ small corporations	36%	(177)
Top executives/ large corporations	24%	(86)

3. See Appendix for full table.

Even when exploring responses to trade-offs that directly impact on the operations of many corporations, we find a large segment of the business community giving first consideration to environmental implications. However, there are instances in which we find substantial difference between the attitudes of the public and businessmen.

In the area of environmental protection and jobs, 39% of heads of smaller corporations and 34% of executives of larger companies believe we should maintain air pollution standards as they are *even if some factories must close* as a result; 55% of the public endorse maintaining current air quality standards under these conditions. In the area of energy production, 56% of the public think environmental regulations should be maintained even if it slows the production of energy; 36% of executives of small companies and 24% of executives of large companies concur. Compared to the general public, significantly fewer business executives believe environmental protection should take precedence over energy production. However, it is important to note that energy policy can have a profound impact on sound business operations, and therefore it is not surprising that majorities (62% of executives of large companies and 53% of executives of small companies) favor a wholehearted effort to increase energy availability.

Social scientists and public opinion analysts have cautioned that trade-off questions such as those above may pose "artificial dilemmas" and oversimplify policy options. And, indeed, on some trade-off questions a significant number of executives rejected the trade-off as an unrealistic "either/or" situation.[4] But the survey results are of great value in documenting for the first time that executive opinion is far more resonant with public opinion on the environment than is commonly portrayed.

4. See Appendix for full table.

Responses to a question measuring balance between economic and environmental options reveal that close to half of the small- and large-business samples (45% and 58%) choose *both* environmental protection and economic growth and only one-third choose to lessen environmental protection (Table 2.4). This illustrates that their support for economic imperatives does not reflect a rejection of environmental concern, but rather *a commitment to* economic growth and finding a means of achieving both imperatives simultaneously.

As is true of businessmen, only a minority of the public (24%) favor relaxing environmental standards. The public tends to emphasize slowing the *rate* of economic growth to ensure environmental protection (49%) and is less likely than business executives to believe that both growth and protection can be achieved at the same time.

Table 2.4: Goals of Growth and Environmental Protection

	General Public	Top Executives/ Small Corporations	Top Executives/ Large Corporations
	%	%	%
We can achieve our current goals of environmental protection and economic growth at the same time.	24	45	58
We must relax environmental standards in order to achieve economic growth.	24	32	30
We must accept a slower rate of economic growth in order to protect the environment.	49	21	9
Don't know	3	2	3
(Number of respondents)	(1310)	(177)	(86)

Philosophic versus Pragmatic Goals: The Roots of Conflict

To illuminate the roots of conflict between the business community and environmentalists and to discern potential pathways for increased communication between the two groups, the memberships of four major nationwide environmental organizations were surveyed.

The organizations consisted of the Natural Resources Defense Council, Inc.; Environmental Action; the Wilderness Society; and Nature Conservancy. The consistency of responses among all four groups allowed the pooling of their survey answers; in the following discussion, therefore, mention of the environmentalist sample refers to all 343 individuals polled.

The most striking discovery emerging from the analysis is that business executives share with the general public a similar vision of national priorities. In comparison to environmentalists, responses of businessmen and the general public remain remarkably consistent throughout the report. In addition, responses of the members of the environmental groups reveal that they have their own vision of *national priorities*—and this vision is, to a considerable extent, the mirror opposite of the executives'. As we see from the rank ordering in Table 2.5, the public and businessmen share a concern with "pressing" socioeconomic problems, while members of the environmental groups focus on more general societal goals.

The differences between the two groups can perhaps be best summarized as an emphasis on *pragmatic goals* versus an emphasis on *philosophic goals*. Both of these tendencies have roots in American traditions.

Among the business samples, all but one of the top seven priorities ("protecting freedom of speech") call for solving socioeconomic problems: fighting crime, maintaining a strong economy, maintaining order in the nation, etc. Among the environmental group sample, there is a nearly complete inversion of national goals. Their priorities reflect a rejection of the primacy of economic concerns; all but one of their top seven priorities ("fighting against crime") stress "philosophic" aims for society: protecting nature, progressing toward a less impersonal society, and toward a society that values ideas more than money, etc.

Table 2.5: Priority Rankings of National Goals: General Public, Corporate Executives, Environmental Group Members[5]

General Public	High Priority %	Top Executives/ Small Corporations	High Priority %
Fighting against crime	92	Maintaining a strong economy	88
Protecting freedom of speech	83	Protecting freedom of speech	83
Maintaining a strong economy	81	Maintaining order in the nation	79
Maintaining order in the nation	80	Fighting against crime	78
Fighting rising prices	80	Fighting rising prices	65
Protecting nature	77	A strong defense force	63
Seeing that people have more say in how things get decided at work and in their community	69	Maintaining a high rate of economic growth	63
A strong defense force	65	Protecting nature	40
Giving people more say in important government decisions	61	Giving people more say in important government decisions	33
Progressing towards a less impersonal, more humane society	61	Progressing toward a less impersonal, more humane society	28
Progressing toward a society where ideas are more important than money	47	Seeing that people have more say in how things get decided at work and in their community	26
Maintaining a high rate of economic growth	46	Progressing toward a society where ideas are more important than money	19

5. In analyzing this table, rankings should be used rather than percentages, as the four groups showed varying levels of selectivity. The general public was much more likely to assign a high priority to many problems than the businessmen or the environmental group members, as the table illustrates.

Table 2.5: *(continued)*

Top Executives/ Large Corporations	High Priority %	Environmentalists	High Priority %
Fighting against crime	92	Protecting nature	92
Protecting freedom of speech	88	Protecting freedom of speech	89
Maintaining order in the nation	87	Fighting against crime	75
Maintaining a strong economy	83	Progressing toward a less impersonal, more humane society	74
Fighting rising prices	68	Progressing toward a society where ideas are more important than money	68
A strong defense force	66	Seeing that people have more say in how things get decided at work and in their community	64
Maintaining a high rate of economic growth	53	Giving people more say in important government decisions	57
Protecting nature	52	Maintaining a strong economy	54
Giving people more say in important government decisions	43	Fighting rising prices	50
Progressing towards a less impersonal, more humane society	42	Maintaining order in the nation	47
Seeing that people have more say in how things get decided at work and in their community	40	A strong defense force	26
Progressing toward a society where ideas are more important than money	33	Maintaining a high rate of economic growth	14

What accounts for the differences between business executives and environmental advocates? Predictably, executives are more likely to describe themselves as political conservatives (52% of small-company executives, 54% of large-company executives, 15% of environmental group members), while the members of environmental organizations are likely to describe themselves as liberals (48% of environmental group members, 6% of small businessmen, 10% of large businessmen).

Table 2.6: Political Orientation

On political issues, which of the following best describes your usual position?

	General Public	Top Executives/ Small Corporations	Top Executives/ Large Corporations	Environmentalists
	%	%	%	%
Liberal	17	6	10	48
Middle of the road	45	40	36	33
Conservative	35	52	54	15
Don't know	3	2	0	4
(Number of respondents)	(1310)	(177)	(86)	(343)

While of course 100% of the executives are involved in business and management, those belonging to the environmental groups are either involved in the service sector as doctors, lawyers, and academics—or they are not working (students, housewives, or retired). Thus, for the most part, the businessmen and environmental advocates exist in vastly different milieus. The executives are far more likely to deal in a marketplace where "bottom line" considerations are key. The members of environmental organizations, on the other hand, who are not under such pressure to balance their philosophic desires against their "cost," are disposed to place more weight on the importance of abstract ideals.

Given the vast gulf between national priorities of businessmen and environmental advocates, it is important to recognize that disagreement over environmental issues arise not only from disagreements on specific policy details, but also in part from basic underlying assumptions about the desired direction of our country's progress. The question then arises as to what hopes there may be for a reconciliation between these two key actors in the policy arena and how can such hopes be best pursued.

Toward a Middle Ground

Apart from national priorities, it is interesting to note that in almost every instance, the attitude of the American public toward economic and environmental concerns falls somewhere in between that of the business executives on the one hand and the environmentalists on the other. However, even where the three groups disagree, there is a tendency for the general public to approximate more closely the sentiment of the business community than the environmentalist movement. For example:

- 74% of business executives, 76% of the general public, and 94% of environmentalists agree that the earth is like a spaceship with only limited room and resources.

- 37% of business executives, 56% of the general public, and 87% of environmentalists support maintaining air pollution standards as they are even if some factories close as a result.

- 20% of business executives, 40% of the general public, and 77% of environmentalists want to preserve wilderness areas at all costs, instead of opening them up for timber harvesting.

Given the public's ratings of national goals, both environmental activists and members of the business community would find citizens most responsive to approaches that integrate strategies for economic revitalization with efforts to safeguard the environment. The survey reveals that the public is much more likely to give highest priority to maintaining a strong economy than is the environmental group (third versus eighth in priorities). The public is also, however, much more likely to give high priority to protecting nature than are businessmen (sixth versus eighth).

Table 2.7: "Spaceship Earth," Jobs, and Timber Harvesting

The earth is like a spaceship with only limited room and resources.

	Percent Agreeing	(Number of Respondents)
	%	
General public	76	(1310)
Top executives	74	(263)
Environmentalists	94	(343)

In the area of environmental protection and jobs: Maintaining air pollution standards as they are even if some factories close as a result.

	Percent Agreeing	(Number of Respondents)
	%	
General public	55	(1310)
Top executives	36	(263)
Environmentalists	87	(343)

In the area of timber production and wilderness preservation: Preserve wilderness areas at all costs.

	Percent Agreeing	(Number of Respondents)
	%	
General public	40	(1310)
Top executives	20	(263)
Environmentalists	77	(343)

Another notable finding extracted from the ranking of national priorities is that among both the public and members of environmental groups maintaining a high rate of economic growth ranks last on the national agenda. It is also noteworthy that maintaining a high rate of growth ranks only *seventh* among business executives as a national priority. This may be indicative of a national de-emphasis on sustaining a *high rate* of growth, in favor of a new emphasis on "quality growth." (This hypothesis will be discussed in the chapters that follow.) This is also another way in which public opinion creates a social context that emphasizes

compromise over contention. There is an increasing sense, as has been discussed, that environmental protection is now widely perceived as a management, rather than crisis, issue.

As Bob Bonczek, director of environmental affairs at E. I. DuPont de Nemours and Co., puts it: "Our traditional, adversarial process works, but it is inefficient at this time. DuPont is not interested in filling the courts with lawsuits or getting more laws through Congress, but in solving problems."[6]

Similarly, some environmental leaders are now calling for a more moderate and conciliatory approach in relating to the business community. Declared Christopher Palmer, director of energy and environment of the National Audubon Society:

> Too often environmentalists give the impression of wishing economic growth would somehow go away. But economic growth and increased productivity are needed to create new jobs, to increase our investments in energy efficient housing, and our investments in new less-polluting industrial processes ...We should all be seeking the right kind of growth, growth that does not degrade the environment that others must share.[7]

There is among businessmen a new willingness to accept the legitimacy of the environmentalists' perspective. As one chief executive of a FORTUNE 300 company phrases it:

> [The] market is not comprehensive enough to stand as the sole arbiter of today's problems. It does not always consider the impact of its actions on third parties or on future generations ...In this, the environmentalists have been a prod to conscience, to understanding and to action.[8]

6. David F. Salisbury, "Beyond Environmental Extremism," *Christian Science Monitor*, 3 August 1982, p. 130.

7. Christopher Palmer, "Business and Environmentalists: A Peace Proposal," *Washington Post*, 8 August 1982, p. C7.

8. Bruce Smart, "Stewardship in a Finite World," speech at the Los Angeles Town Hall, 9 February 1982.

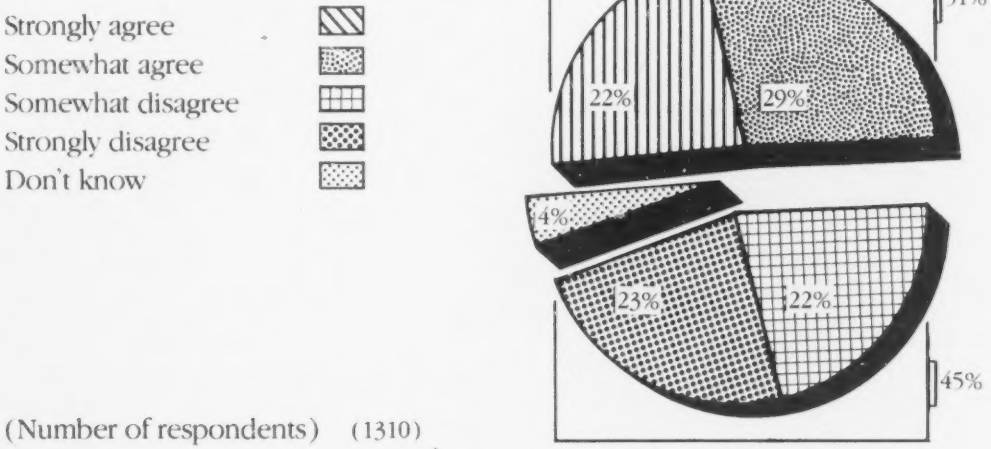
A Favorable Atmosphere for Industry Initiatives

The survey findings suggest that there is presently a favorable atmosphere for industry initiatives that aim to strike a balance between economic and environmental goals.

Findings cited previously show the firm public support of the free enterprise system, and, relatedly, a solid aversion to government intrusion in the private sector. But not only, as shown in Chapter One, do solid majorities of the public believe that incentives for private profit are essential for a healthy economy and that government regulation of business does more harm than good, we also find that despite frequent media portrayals of industry as an "environmental villain," half of Americans (51%) feel that *current* pollution control measures have imposed unfair burdens on industry. Such belief in American industry, and such unexpected willingness to identify with the plight of industry in meeting environmental regulations, show that industry initiatives would be far more palatable to the public than to rely on government regulation.

Table 2.8: Pollution Control Measures and Industry

Pollution control measures have created unfair burdens on American industry.



(Number of respondents) (1310)

But while the time seems particularly ripe for industry to assert a more self-governing role in initiating efforts to strike a reasonable balance between environmental protection and economic revitalization, it is also clear from the study that industry would have to make a strong effort to convey the sincerity of its commitment.

From the accompanying Table 2.9, it can be seen that of ten major American institutions, major companies rank last in terms of the public trust. Environmental groups rank somewhat better—seventh place.

The low level of public confidence has been well documented in many surveys throughout the years. What is most interesting in the context of the present study, however, is the possibility that this low public estimation may be due in part to incorrect impressions of business executives and their outlook on social issues. While, for example, executives are commonly portrayed as "anti-environment," we have seen in this report that there is a high degree of environmental concern among the business community. Beyond this, it is notable that while the priorities of the surveyed executives are far closer to those of the public than are the priorities of members of environmental groups, environmental groups receive a higher rating of trustworthiness from the general public than do corporations.

Table 2.9: Trustworthiness of Major Institutions

	Almost All of the Time		Most of the Time	Seldom	Never	Don't Know
	%	%	%	%	%	%
Medical community	18	→79←	61	16	2	3
Higher education	18	→79←	61	16	1	4
Newspapers and magazines	14	→72←	58	24	3	1
Television	12	→67←	55	29	3	1
Scientific community	12	→63←	51	26	5	6
Organized religion	17	→62←	45	29	7	2
Environmental groups	11	→60←	49	30	6	4
The military	14	→59←	45	30	7	4
Organized labor	8	→46←	38	41	8	5
Major companies	5	→43←	38	46	8	3
(Number of respondents)	(1310)					

Chapter Three

New Principles Guiding Attitudes Toward Growth

When one considers that what distinguishes the fertile earth from the barren moon is a severely threatened eight inches of topsoil and an equally threatened and fragile atmosphere, it is clear that there must be a shift to the ethic of stewardship. It is instructive that the word "steward" is traceable to the Greek root "oikonomous," or housekeeper. The Greek word, in turn, is the basis of the English word "economy," which once meant keeping a house in order."

TOM HAYDEN
The American Future: New Visions Beyond Old Frontiers
(Boston: South End Press, 1980), p. 34.

Introduction

The survey results described in the preceding chapters emphatically suggest that the American people are considering economic growth in a new perspective, a perspective that incorporates a desire to insure the quality of the environment with a desire to insure opportunities for development and advancement. But is there actually a new "ethic," a complete and coherent set of values that have changed the way we view economic progress?

The environment has been long held by opinion analysts to be a "motherhood" issue, meaning that any time one talks of protecting the environment, he can be sure of an automatic nod of public approval, even if this apparent approval does not reflect the public's true sentiments. The only "true" environmentalists, according to popular mythology, are young, liberal, and elite. Has the present survey so far only been recording the facile responses of a public paying lip-service to the idea of balancing economic considerations against environmental costs, or has it discovered a deeply held set of beliefs that will affect national and local decision making in the years to come?

This chapter, by providing a tool for measuring attitudes toward growth, demonstrates that there are two divergent perspectives on the most desirable approaches to economic development. Our findings suggest these distinctive orientations will create the context for public decision on critical economic/environmental trade-offs.

Measuring Orientations To Growth

In order to measure orientations toward growth, an index consisting of six belief statements was devised to discern which Americans place higher priority on the *utilization* of available natural resources, and which place higher priority on *preservation* of resources. Such an index, or continuum, would not measure attitudes toward disparate issues but rather would reveal the strength of a respondent's commitment to a set of broad beliefs that define the way he or she looks at the world.

The success of the Growth Orientation Continuum would be that one's "score" or placement on the continuum would allow us to predict with consistency his or her attitudes on a range of critical national uses. As we shall see in the following

chapter, a person's responses to the Growth Orientation Continuum *do* allow strikingly accurate predictions of attitudes on a diversity of key issues. The six statements comprising the index appear in Table 3.1.

In the discussion that follows, it shall become clear that the "utilizers" and "preservers" among us do not hold irreconcilable views. They are not "pro-growth" advocates confronting "no-growth" advocates; rather they represent the divergent *priorities* of Americans in their consideration of the concept of growth. What is more, as the next chapter shall show, there is a great deal of common ground between the two extremes, while the bulk of the American public represents a blend of both points of view.

Public Response to the Growth Orientation Continuum

Examining public reaction to each of the statements that comprise the continuum, we find that 84% of the public concur that the balance of nature is very delicate and easily upset by human activities. There is similarly emphatic agreement (76%) that the earth is like a spaceship with only limited room and resources. Sixty-one percent (61%) of Americans believe plants and animals *do not* exist primarily to be used by humans.

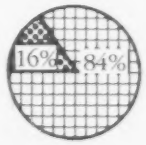
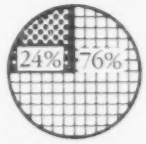
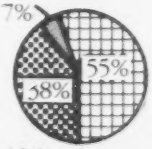
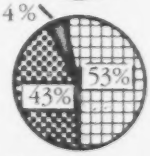
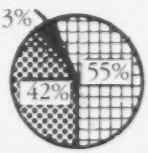
On statements the public was called upon to *disagree* with in order to assert a high degree of preservationism, we find 39% disagree that modifying the environment for human use seldom causes serious problems; 43% do not believe there are no limits to growth for advanced nations like the United States; 42% disagree that mankind was created to rule over the rest of nature (Table 3.1).

Concepts such as "spaceship earth" have only recently appeared in popular literature but have become widely accepted. These responses provide evidence that the narrower "environmentalist" perspective, with its focus on the "single issues" of pollution, conservation, and population growth, has broadened and stimulated a large segment of our citizenry to think in terms of the finiteness and fragility of the world.

Of course, the accompanying table also indicates that there are large numbers of Americans who do *not* concur with several elements of the resource preservation ethic; however, the table does not clarify which members of the public are the

most ardent and consistent in their commitment to the premises of the preservationist ethic. Who are the Americans who are more inclined to a utilization orientation, and who are the Americans with a greater tendency toward a preservationist outlook? Are the most adamant resource preservers a major segment of society, or are they merely an elite, isolated from the goals and beliefs of the public as a whole?

Table 3.1: The Growth Orientation Continuum [1]

Resource Utilizers	**Resource Preservers**	**General Public**
Those placing high priority on *utilization* of resources tend to:	Those placing high priority on *preservation* of resources tend to:	**Agree** ____ **Disagree** ___ **Don't know**
Statement		
Disagree	**Agree**	
The balance of nature is very delicate and easily upset by human activities.		16% 84%
Statement		
Disagree	**Agree**	
The earth is like a spaceship with only limited room and resources.		24% 76%
Statement		
Disagree	**Agree**	
Plants and animals *do not* exist primarily to be used by humans.		39% 61%
Statement		
Agree	**Disagree**	
Modifying the environment for human use seldom causes serious problems.		7% 38% 55%
Statement		
Agree	**Disagree**	
There are no limits to growth for advanced nations like the United States.		4% 43% 53%
Statement		
Agree	**Disagree**	
Mankind was created to rule over the rest of nature.		3% 42% 55%

© Riley E. Dunlap and Kent D. Van Liere

De-Mythifying the Preservation Ethic

The utilization perspective on growth reflects the historical tradition of Americans, whose forefathers were pioneers in a wilderness that was as vast as it was bountiful. Perhaps because this utilization orientation is considered a fundamental strain of our national character, the preservationist outlook may be somewhat "suspect" as being an elitist perspective. Certainly, the prototypical environmentalist is often portrayed as the progeny of "privileged liberals." Or, as William Tucker describes it in his book, *Progress and Privilege*:

> Environmentalism has been the mass adoption of aristocratic values by America's burgeoning upper middle class. It is the "conservatism of the liberals"... One does not become an environmentalist until one achieves some kind of privilege and feels one has something worth protecting. Environmentalists are a *privileged minority*.[2]

In addition to describing environmentalists as being privileged and liberal, past writings and research have hinted that environmentally concerned Americans are predominantly young and live in the larger cities.

Our analysis shows that such portrayals are stereotypes rather than accurate representations of the two tendencies. It is to escape this erroneous connotation that we speak here of the preservationist ethic and the utilization ethic instead of the more commonplace and, we believe, misleading environmental/business conflict.

Responses to the six questions in Table 3.1 were combined to form a sensitive research instrument measuring attitudes toward growth, the "Growth Orientation Continuum." The scoring ranged from 6 to 24. The distribution of responses reveal that the majority of Americans are quite balanced in their views of growth. There are extremely few respondents clustered at either end of the continuum. These results demonstrate that relatively few of those interviewed were either totally "utilizer" or "preserver" in their responses to all six questions. Americans are not sharply divided.

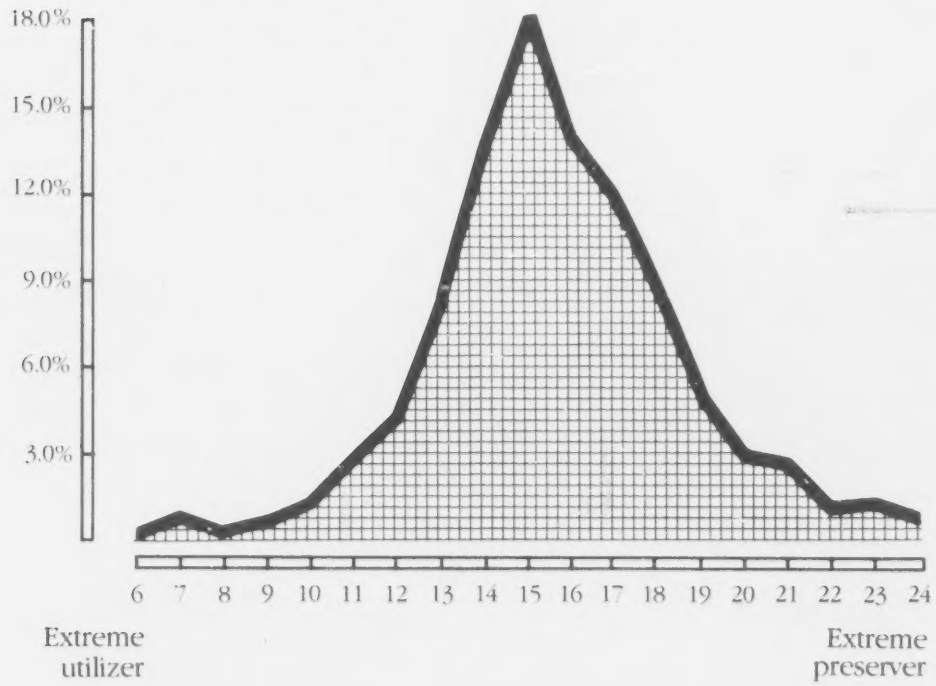
1. We are indebted to Riley E. Dunlap and Kent D. Van Liere for the items that comprise the Growth Orientation Continuum. A fuller account of these items can be found in their own writing, most particularly "The 'New Environmental Paradigm': A Proposed Measuring Instrument and Preliminary Results," appearing in *The Journal of Environmental Education* 9 (Summer 1978): 10-19.

2. William Tucker, *Progress and Privilege: America in the Age of Environmentalism* (New York: Anchor Books/Doubleday and Company, 1982), p. 34. Author's italics.

Responses on the growth orientation continuum were grouped in four distinct segments to facilitate analysis of who among the public tends to be most utilizationist, in outlook and who tends to be most preservationist. Applying the Growth Orientation Continuum against the full range of 14 demographic variables, we find that rather than being restricted to a narrow segment of the populace, many Americans in all subgroups of our society lean toward the resource preserver end of the spectrum, just as many Americans in all demographic categories lean toward the resource utilizer perspective.

The first segment consists of those who show the strongest tendency toward the resource utilization perspective. The second and third segments are composed of those Americans with moderate orientations toward growth. The fourth segment is made up of those who are most inclined toward a preservationist orientation.

Table 3.2: Growth Orientation Continuum Scores



Number of respondents (1310)

Far and away, the most effective determinants of growth orientation are age, education, and level of religious involvement. Income is not a primary factor, nor is urban living nor a liberal ideology.

Table 3.3 shows the impact of the three factors that analysis shows to be most strongly related to placing a high priority on resource preservation or utilization.

Table 3.3: Growth Orientation and Age, Education, Level of Religious Commitment

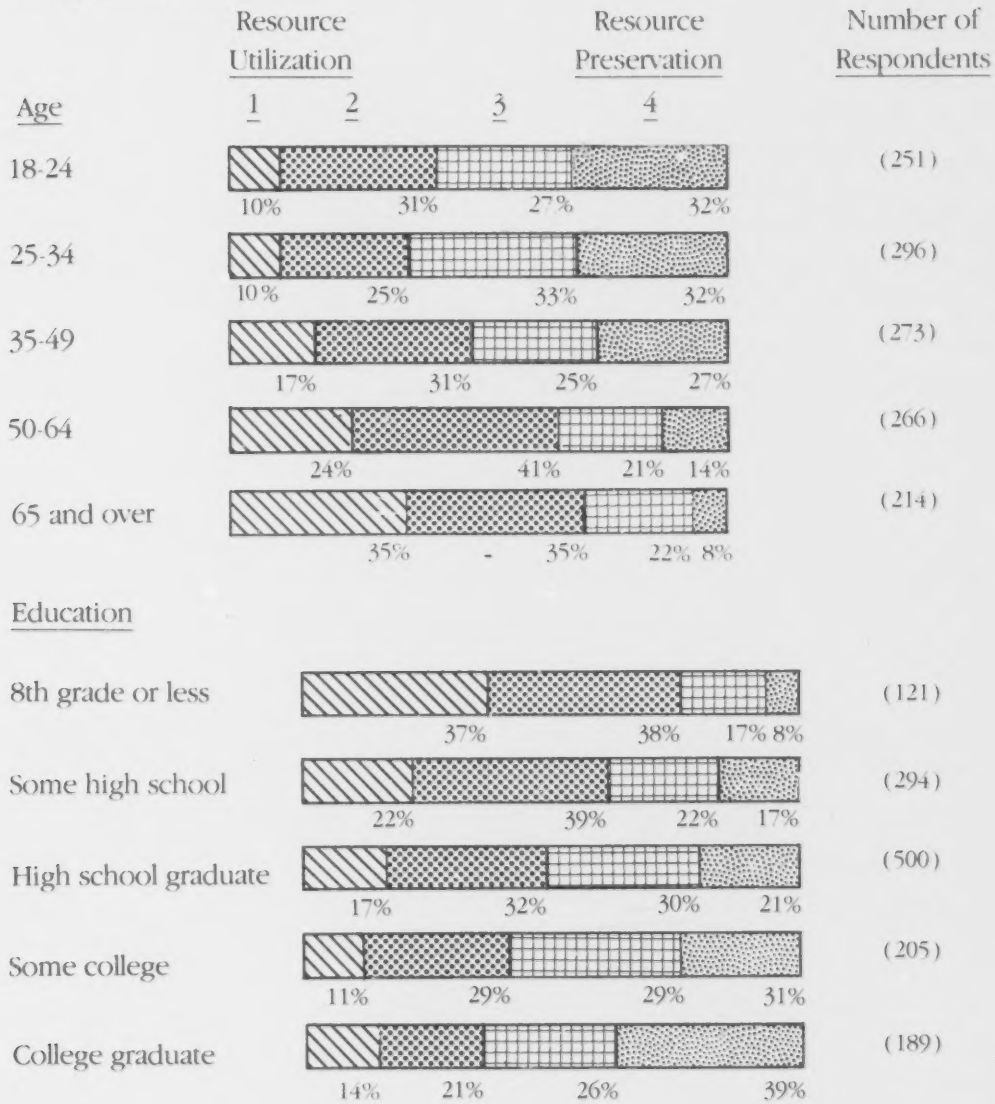


Table 3.3: *(continued)*

	Resource Utilization		Resource Preservation		Number of Respondents
	1	2	3	4	
Level of religious commitment					
1 Low	14%	26%	24%	36%	(310)
2	12%	28%	32%	28%	(356)
3	23%	39%	21%	17%	(315)
4 High	25%	35%	27%	13%	(329)

The table shows that *age* shares preeminent importance with education as a predictor of growth orientation. Not surprisingly, we find that older Americans exhibit a tendency toward the more traditional resource utilization growth orientation. But beyond this, the factor of age does not predict growth orientation in the way that prior commentaries have led us to expect. A disposition toward the preservationist ethic *is* exhibited by those under 50 years of age. About one-third (32%) of 18- to 34-year-olds are preservationist in their growth outlook, and a similar percentage (27%) of the 35- to 49-year-old group maintain a preservation orientation. Previous work has not identified the similarity in growth outlook between those in their 20's, 30's, and 40's.

Conversely, those who demonstrate the strongest utilization outlook are concentrated in the 50-year-old and older group. Those in the 50- to 64-year-old group tend to be the most moderate in their growth outlook, while those 65 and older are the most likely to have a utilization outlook (35%), compared with 24% of the 50-64 age group, 17% of those 35 to 49, and 10% of those 18 to 34.

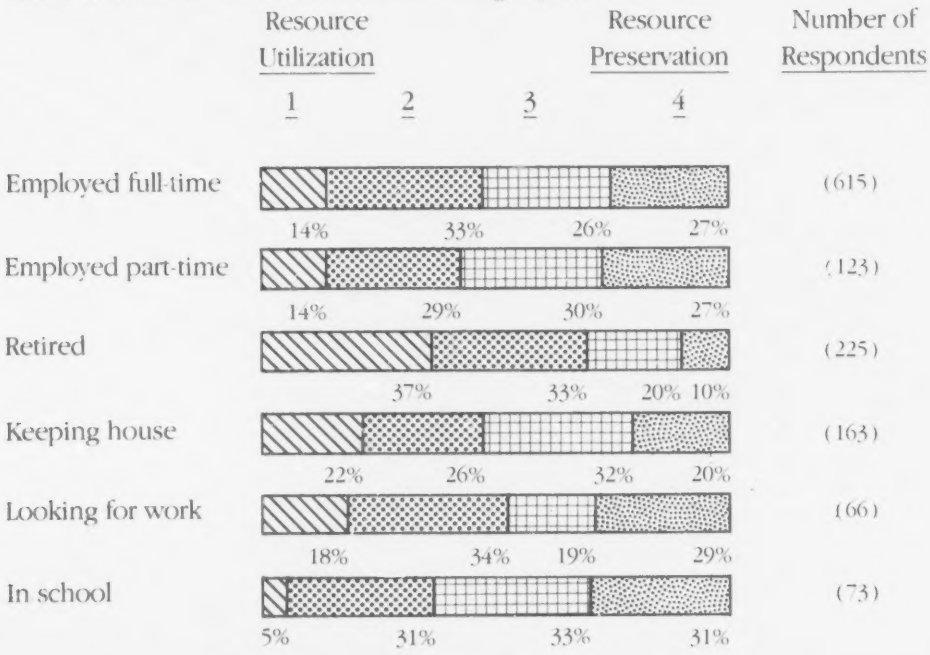
It is surprising that only one in ten (10%) of young Americans 18 to 24 share a utilization outlook. Recent studies and articles document the growth of "pragmatism" among today's college-age generation. In an article surveying the current college-age scene, for example, *Time* magazine commented:

> If [students today] lack the optimism of their predecessors, they have substituted a survivalist mentality...Today's preferred areas of study are business, engineering, computers and health professions.[3]

Similarly, Dean Hoge, a noted chronicler of student trends, observed in his 1980 review of polling data that "college students have become more conservative, less libertarian, more self-centered and more privatistic in the late 1970's. One finds little idealism or altruism in their viewpoints."[4] Stemming from these observations, we might expect respondents age 18 to 24 to adopt a more traditional resource utilization outlook on growth.

In such times it is fascinating that so many students have integrated a cautiousness about growth and resource use with their pragmatic outlook. Our study shows that one-third of those now in school (31%) place a high priority on resource preservation, a percentage almost identical to young Americans as a whole. It is here that we discover the first clue that the preservation tendency does not conflict with a belief in business, science and technology, or personal progress.

Table 3.4: Growth Orientation and Employment Status



3. "Head High, Chin Up, Eyes Clear," *Time*, 28 June 1982, pp. 56-57.
4. Dean R. Hoge, Cynthia L. Luna, and David K. Miller, "Trends in College Students Values between 1952 and 1979: A Return of the Fifties?" *Sociology of Education* 54 (October 1981): pp. 263-271.

Those with few years of schooling tend to be more attracted to the utilization outlook. Slightly more than a third (37%) of respondents with an eighth-grade education or less favor resource utilization, compared with 22% of those with some high school, 17% of high school graduates, 11% of those with some college, and 14% of college graduates. The dramatic impact of education is equally evident in resource preservation attitudes: four out of ten (39%) college graduates are resource preservers, compared with only about one out of ten (8%) of those with an eighth-grade education.

Some social observers, including Burton Yale Pines of the Heritage Foundation, believe that the influence of education on an individual's world view can be explained in large measure by students' exposure to the "New Class" of liberal academics. Reflecting on the "jarring differences" in attitudes that are often found between Americans "whose education stopped with a high school diploma," and those with a postgraduate education, Pines states:

> The former group has had relatively limited exposure to New Class teachers; the latter spend at least a quadrennium inside New Class dominated institutions. [The] New Class promotes views shaped greatly by the counterculture hostility to capitalism, rejection of economic growth...A special villain is technology, excoriated for ravaging the environment and squandering resources. Ignored are technology's achievements and the evidence of nearly two centuries of dynamic growth.[5]

Pines's hypothesis is a widely accepted but, we believe, misleading explanation for the tendency of citizens with higher levels of education to be attracted to the preservationist ethic. True, preservationism, with its commitment to the concept of a finite and delicate world, might appear to reflect "counterculture" values as well as hostility to the free-market system, and the vilification of technology. But our findings indicate Pines's diagnosis to be inaccurate on two counts.

5. Burton Yale Pines, *Back to Basics: The Traditionalist Movement That Is Sweeping Grass-Roots America* (New York: William Morrow and Company, 1982), pp. 322-323.

First, as shall be illustrated in our discussion of the influence of the preservationist perspective in the policy arena, the ethic is *not* at all synonymous with "counter-culture antagonism" toward our economic system or technological innovation. Second, our data provide support for the hypothesis put forward by sociologists Riley E. Dunlap and Kent D. Van Liere that Americans with higher levels of education express more concern for the environment because "they are more likely to have been exposed to 'ecological' ideas (via higher education, mass media, personal reading, etc.)."[6]

As a test of this concept, respondents in our survey were asked if they could describe what transpired at Three Mile Island and at Love Canal, and if they could identify Secretary of the Interior James Watt. These items were selected because they have been the focus of widely covered controversies regarding the environment. We find that the preservers were far more likely than resource utilizers to identify correctly Three Mile Island as the site of a nuclear-reactor accident (84% vs. 58%); Love Canal as a toxic-waste dump (53% vs. 29%); and James Watt as Secretary of the Interior (31% vs. 16%).

Table 3.5 Identification of Love Canal, Three Mile Island, and James Watt

Percent that correctly identified	Resource Utilization			Resource Preservation
	1 %	2 %	3 %	4 %
Love Canal	29	30	36	53
Three Mile Island	58	60	74	84
James Watt	16	16	19	31
(Number of respondents)	(245)	(418)	(340)	(307)

6. Dunlap and Van Liere, p. 16.

Like the influence of age, the influence of education on one's growth orientation has extremely important implications for the future. Since levels of education in this country increase with each generation, it may be forecast that responsiveness to the resource preservation ethic will increase commensurately. Furthermore, quite beyond the parameters of classroom education, exposure to information via the media also continues to increase in our society. In tandem with formal education, the "informal" education provided by the media can be expected to contribute to greater awareness of the preservationist idea among the public as a whole. It should be emphasized that this would not necessarily mean an increase in the percentage of extreme preservationists, but rather a rise in preservationist concern in the large segment of the American public that is clearly moderate in its outlook.

Religious commitment is revealed by analysis to be strongly related to placing priority on resource utilization, with an inverse relationship to preservationism. In examining patterns of religious practice, we see that the utilizers are far more likely than the resource preservers to attend a religious service, read the Bible, and encourage others to turn to prayer. The most noted contrast is in the area of encouraging others to turn to religion. Close to half (46%) of the committed resource utilizers encourage others to turn to religion compared to less than one-fifth (17%) of the committed resource preservers. Relatedly, strong utilizers are more likely than strong preservers to believe a spiritual approach to modern problems is more important than a scientific approach (79% vs. 59%).

This more intense religious commitment strengthens the impression that the committed utilizers tend to be those who give a high priority to values deeply ingrained in American traditions.

Table 3.6 Growth Orientation and Level of Religious Commitment

Percent that frequently:	Resource Utilization			Resource Preservation
	1 %	2 %	3 %	4 %
Attend a religious service	59	60	53	41
Encourage others to turn to prayer	44	41	36	24
Encourage others to turn to religion	46	38	30	17
Participate in a religious social activity	39	36	32	21
Listen to religious broadcasts	39	33	23	14
Read the Bible	47	38	34	24
(Number of respondents)	(243)	(415)	(337)	(305)
Ultimately, a spiritual approach to modern problems is more important than a scientific approach: *strongly agree and agree*	79	72	71	59
(Number of respondents)	(228)	(393)	(323)	(294)

Secondary Influences and Growth Orientation

After assessing the influence of age, education, and religious involvement, we find that there remain only variables that are far weaker determinants of one's growth orientations. Among these secondary factors are income, political ideology, place of residence, region, race, and marital status.

Income has surprisingly little relationship with growth orientation. Americans with high levels of income (over $40,000) are not strikingly different in growth orientation than those with moderate incomes ($15,000-$25,000).

Table 3.7: Growth Orientation and Income

	Resource Utilization			Resource Preservation	(Number of Respondents)
	1 %	2 %	3 %	4 %	
Under $10,000	23	36	20	21	(275)
$10,000-$15,000	21	32	25	22	(221)
$15,001-$25,000	20	32	27	21	(331)
$25,001-$40,000	12	29	31	28	(258)
Over $40,000	12	26	27	35	(107)

Looking at the relationship between income and preservationism, the difference between the most and least affluent is considerably less than the differences between the oldest and youngest (24 points), most and least educated (31 points), and those exhibiting the most and least religious commitment (22 points).

Table 3.8: Resource Preservation: Key Factors

	Preservation Orientation	Percent Differences
	%	%
Income		
Under $10,000	21	
$10,000-$15,000	22	
$15,001-$25,000	21	
$25,001-$40,000	28	
Over $40,000	35	14
Age		
18-24	32	
25-34	32	
35-49	27	
50-64	14	
65 and over	8	24
Education		
8th grade or less	8	
Some high school	17	
High school graduate	21	
Some college	31	
College graduate	39	31
Level of Religious Commitment		
1 Low	35	
2	28	
3	17	
4 High	13	22

More important, when these three more influential factors are controlled for, so that the influence of income is isolated, the impact of income is revealed to be comparatively insignificant (see Appendix).

These findings are noteworthy because they dispel the assumption that people who believe we live in a finite world with a fragile ecosystem are only of high economic standing. This theory has been commonly accepted since the dawn of the Environmental Decade in 1970 and is the thesis of William Tucker's new book, *Progress and Privilege*. Writes Tucker:

> The idea of looking on material progress and economic security as an irrelevant nuisance cannot be picked up overnight...I have the distinct impression it now takes at least two generations to make an environmentalist. It is usually the sons and daughters of people who have achieved complete material security who make the most strident environmentalists.[7]

In contrast to this conclusion, our data show that resource preservationist tendencies are not confined to "the upper classes" but extend to those with moderate incomes—and a significant percentage of those with low incomes—as well. Approximately one-fifth of those with incomes of $25,000 or less lean toward a utilization orientation to growth. While those with incomes higher than $25,000 are less likely to fall into the far end of the utilizer range of the growth continuum, the differences are not dramatic, as Table 3.7 indicates.

The moderate influence of political orientation is also an unexpected revelation (Table 3.9). Clearly, attitudes towards growth and resource use are only moderately associated with one's party affiliation. About one-quarter (25%) of Republicans fall into the extreme utilization category compared to one-fifth (20%) of Democrats. About one-fifth of those who identify themselves as Democrats (20%) or Republicans (18%) are committed resource preservers. Conservatives are nearly equally disposed to a utilization perspective (18%) as those in the middle of the road (19%) and liberals (16%). Americans who describe themselves as "liberal"

7. Tucker, p. 32.

are about twice as likely to be preservers (40%) as conservatives (19%) and "middle of the roaders" (22%). The following chapter will show those with a more preservationist orientation in no way conform to the "liberal line" on a range of critical policy issues in the policy arena. Most telling, as we shall see, both extremes, preservers and utilizers, feel there should be *less* government involvement in the economy and in the regulation of business. Because the desire for a diminished role for the federal government is hardly in keeping with liberal philosophy, a leaning toward the preservationist orientation cannot be said to be merely "masked liberalism."

Table 3.9: Growth Orientation and Political Identification

	Resource Utilization		Resource Preservation		(Number of Respondents)
	1 %	2 %	3 %	4 %	
Party Affiliation					
Republican	25	33	24	18	(285)
Democrat	20	33	27	20	(524)
Independent	13	30	26	31	(438)
Political Orientation					
Conservative	18	36	27	19	(453)
Middle of the road	19	33	26	22	(587)
Liberal	16	22	22	40	(220)

Another factor with subsidiary impact on growth orientation is place of residence. There is a stronger tendency toward a preservationist viewpoint among residents of suburban areas (32%) and large cities (28%), while those living in rural areas are more utilizationist in their perspective (22%) (see Table 3.10).

Table 3.10: Growth Orientation and Place of Residence and Region of the Country

	Resource Utilization		Resource Preservation		(Number of Respondents)
	1 %	2 %	3 %	4 %	
Place of residence					
Large city	16	35	21	28	(322)
Suburb	14	24	30	32	(252)
Small town	19	38	27	16	(393)
Rural area	23	29	26	22	(339)
Region of the country					
Pacific	13	29	30	28	(168)
Mountain	16	31	18	35	(61)
West South Central	27	34	19	20	(125)
Middle South	34	31	18	17	(79)
South Atlantic	18	36	28	18	(221)
Middle Atlantic	16	34	22	28	(175)
New England	12	26	30	32	(77)
Middle West	22	31	27	20	(259)
North Central	12	30	32	26	(116)

One explanation for this relationship is that urban and suburban residents are more likely to feel that pollution impinges on their activities. For urbanites, air and noise pollution are constant features of daily life. For suburbanites, their homes represent a refuge from these intrusions. In fact, for many, choosing to live in the suburbs expresses a desire to have access to the city while remaining beyond the reach of the environmentally distressing aspects of inner-city living. Residents of rural areas and small towns are not as likely to experience environmental impurities as people living in and around large cities. Thus, dwelling in small towns or rural communities appears to be more conducive to a utilizer's view of growth than is urban or suburban living.

There are also measurable differences in growth orientation in various regions of the country. Our survey data show that the preservationist orientation is more prevalent in New England (32%) and the Mountain States of Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming (35%), and considerably less prevalent in the South (a combined percentage of 18% for all regions). These regional differences are striking and are fully explored in Chapter Five.

There is a small degree of difference in orientation toward growth among whites, blacks, and Hispanics. Twenty-five percent (25%) of whites are inclined toward the preservationist viewpoint compared with 20% of Hispanics and 14% of blacks (Table 3.11).

Table 3.11: Growth Orientation and Race, Marital Status, and Gender

	Resource Utilization		Resource Preservation		(Number of Respondents)
	1 %	2 %	3 %	4 %	
Race					
White	18	30	27	25	(1088)
Black	23	42	21	14	(157)
Hispanic	12	47	21	20	(43)
Marital Status					
Married	21	31	27	21	(798)
Widowed/Separated/ Divorced	22	38	18	22	(239)
Single	8	29	31	32	(270)
Gender					
Male	19	30	24	27	(637)
Female	18	34	28	20	(670)

While we have said that a disposition toward resource preservation is not restricted to Americans with high incomes and extends to a large percentage of those with moderate and even lower levels of income, it should be noted that almost one-third (31%) of black families are living under the poverty line, compared with 9% of white families.[8] Also 18.8% of blacks are unemployed, compared with only 8.6% of whites.[9] This level of economic disadvantage among the black community as a group is likely to intensify the desire for greater opportunity. The "limits" concept inherent in the resource preservation ethic contrasts most dramatically with efforts by the black community to improve its status. It is therefore predictable that black Americans would evidence less tendency toward this philosophy. In 1979, Vernon Jordan, then director of the Urban League, vividly illustrated black concerns when he said:

> Walk down Twelfth Street [in Washington, D.C.] and ask the proverbial man in the street...what he thinks the basic urban environmental problem is, and he'll tell you jobs.[10]

The last factor with a discernible impact on growth orientation is marital status, with single Americans more inclined toward a resource preservationist outlook (32%) than married (21%) or once married (22%) Americans. This is partly a function of age, since younger people show a greater disposition toward a preservationist stance and are less likely to be married.

Gender, interestingly, has only the barest influence on one's orientation, with 27% of males and 20% of females evincing a tendency toward resource preservation. This is not statistically striking; it is worth citing only in that there has been some suggestion that women were more likely to be concened about environmental matters than men (Table 3.11).

8. U.S. Department of Commerce, Bureau of the Census, *Money Income and Poverty Status of Families and Persons in the United States, 1981.* Current Population Report, Series P60, No. 134, Table 18, p. 27.

9. U.S. Department of Labor, Bureau of Labor Statistics, *Employment and Earnings* (Washington, D.C.: Government Printing Office, September 1982). Also, "Employment Situation: August 1982." USDL 82-310, Table A2.

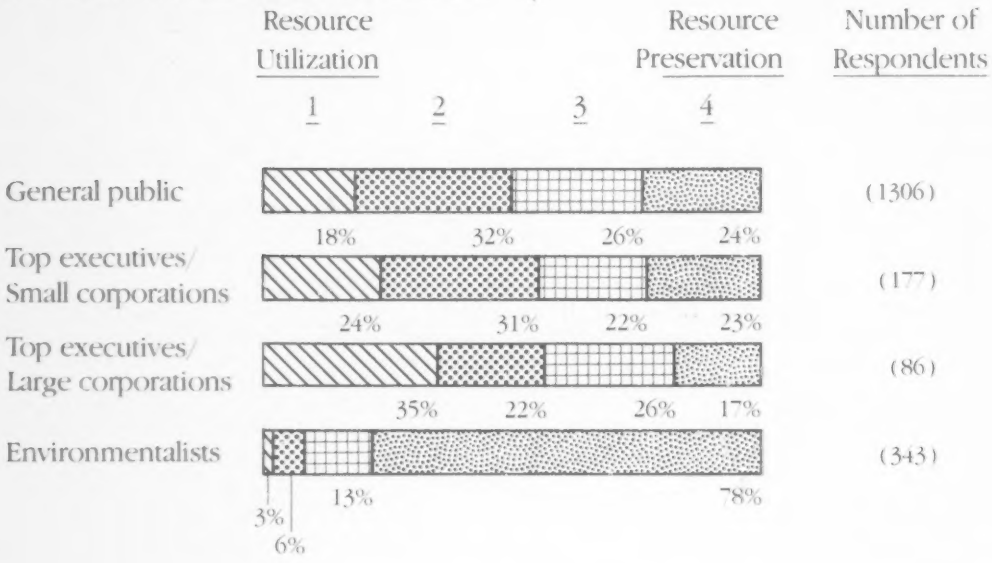
10. Quoted in William Tucker, "The Environmental Era," *Public Opinion*, February/March 1982, p. 46.

Businessmen and Environmentalists: Responses to the Utilization/ Preservation Continuum

Examination of business and environmental group members' responses on the growth items reveals some surprising findings. First, while members of environmental groups are prototypes of the "preserver" growth orientation, contrary to popular assumptions businessmen are not the prototypical resource "utilizers." Second, although members of environmental groups are often thought of as representatives of the general public in their efforts to protect environmental standards, it is the environmental sample rather than the business sample whose position on the growth continuum differs most dramatically from that of the general public.

In attitudes that reflect resource use—utilization versus preservation—environmental advocates cluster decidedly at the preserver end of the continuum. An overwhelming 78% of members of environmental groups fall into this category compared with 23% of top executives of small corporations, 17% of top executives of large corporations, and 24% of the general public. On the other hand, businessmen do not reveal a parallel dedication to utilization: 35% of the large-corporation sample and 24% of the small-corporation sample embrace a "utilizer" commitment to growth, compared with 18% of the general public and 3% of the environmental sample. Businessmen also, as Chapter Two discussed, maintain a varied orientation to growth, fostering an outlook that mixes both utilizer and preserver tendencies. In this regard, they choose a balanced perspective along with the general public. These findings reveal businessmen approximate the general public distribution of opinion on the growth continuum, while environmentalists demonstrate a considerable commitment to resource preservation.

Table 3.12: The General Public, Businessmen and Environmentalists on the Growth Orientation Continuum



Therefore the majority of Americans (58%) cluster toward the center in their orientations to growth, reacting to the utilizationist-preservationist tension by drawing on both perspectives. There are, however, notable differences among some segments of the population in their philosophy of resource use. These differences between those who tend to resource utilization over resource preservation have little meaning, unless they have a discernible impact on our attitudes about important issues in the national arena and in our personal lives. Our analysis, presented in the following chapter, discloses that perspectives on growth can indeed exert a clear influence on public thought and behavior.

Chapter Four

Growth Perspectives and Their Impact: Implications for Policymaking and Lifestyles

Introduction

American attitudes toward growth will have a profound effect on virtually every social and economic issue—from the building of new housing, to the expansion of energy facilities, to the need for additional jobs. On the one hand, the utilization ethic inspires a determination among Americans to maintain a growth rate that will bring about prosperity for the country. On the other hand, the preservation ethic suggests that growth should be limited in order to protect the fragile ecosystem.

This study has revealed that American attitudes today toward growth can be characterized by a continuum, with a tendency toward resource utilization at one end and resource preservation at the other.

This chapter shows how these tendencies are defining our positions on the critical economic/environmental trade-offs we face today and in the years ahead, and how they influence our lifestyles. It also presents the close association between growth orientations and citizen activism, which foretells the growing impact on public policy of attitudes towards growth.

This chapter also underscores the many surprising points of consensus between those who tend towards resource utilitization and those who tend toward resource preservation. We discover that both committed utilizers and committed preservers hold to a firm belief in progress, science and technology, and the free-enterprise system. Also, neither those with a strong utilization orientation or those with a strong preservation orientation favor intensive government involvement in the economy or regulation of business. Because even the preservationist perspective incorporates many traditional values rather than challenging them, it seems likely that attitudes toward growth will subtly shape our national policy and our individual lifestyles; they will not be a source of bitter divisions between our citizens, most of whom would be responsive to a balance between the two tendencies.

Position on Economic and Environmental Trade-offs

The contention that orientations toward growth differentiate Americans in a meaningful way is borne out by public response to a range of economic/environmental trade-off questions. The segment of the public that leans most strongly

toward a utilization orientation exhibits patterns of response that diverge dramatically from those of the segment of the population inclined most strongly toward a preservationist viewpoint. These responses from Americans at extreme ends of the growth continuum are, of course, moderated by the large percentage of the public, clustered toward the center, who hold less polarized views.

Regarding land use, resource preservers are far more likely than resource utilizers to believe we should leave parts of the country untouched by man rather than use the land to obtain whatever resources we need (84% vs. 52%). To a less striking degree, the preservers are more inclined than the utilizers to think wilderness areas should be preserved at all costs rather than opened up to harvest timber when necessary (50% vs. 35%). (See Table 4.1.)

The resource utilizers and resource preservers diverge markedly in their opinions on the best energy policy for the nation. Americans with a preservationist orientation toward growth are more likely than those inclined toward the utilization perspective to believe we should not relax environmental regulations in order to allow production of more energy (66% vs. 46%); that we should wear warm clothes in the house to conserve heat rather than increase energy production to provide more heat for our nation's homes (77% vs. 52%); and that we should stop the construction of nuclear power plants rather than continue to build them to insure an expanding supply of energy (70% vs. 50%).

Lastly, regarding the maintenance of a clean environment and clean air, we find the preservers are more likely to believe there should be a stress on environmental cleanup by American companies over an emphasis on keeping prices lower (77% vs. 51%) and that air pollution standards should be kept as strict as they are, even if some factories must close as a result (67% vs. 45%).

Table 4.1: Growth Orientation and Trade-off Questions

	Resource Utilization			Resource Preservation
	1	2	3	4
	%	%	%	%
In the area of land use:				
Leave parts of our country in their natural states, untouched by man, or	**52**	**54**	**70**	**84**
Use whatever land is needed to obtain the resources we need.	32	38	26	14
Uncertain	16	8	4	2
(Number of respondents)	(245)	(418)	(340)	(307)
In the area of timber preservation and wilderness preservation:				
Preserve wilderness areas at all costs, or	**35**	**35**	**42**	**50**
Open up wilderness areas for timber harvesting when necessary.	52	61	54	49
Uncertain	13	4	4	1
(Number of respondents)	(245)	(418)	(340)	(307)

Table 4.1: *(continued)*

	Resource Utilization			Resource Preservation
	1 %	2 %	3 %	4 %
In the area of energy production:				
Maintain environmental protections even if it slows the production of new energy, or	**46**	**55**	**56**	**66**
Relax environmental protection regulations to increase energy production.	36	35	38	28
Uncertain	18	10	6	6
(Number of respondents)	(245)	(418)	(340)	(307)
In the area of home energy use:				
We should encourage energy conservation by wearing several layers of warm clothes in the house and keeping the heat low to conserve energy, or	**52**	**57**	**66**	**77**
Increase energy production so that most Americans can have a comfortably heated home	45	40	30	20
Uncertain	3	3	4	3
(Number of respondents)	(245)	(418)	(340)	(307)

Table 4.1: *(continued)*

	Resource Utilization			Resource Preservation
	1 %	2 %	3 %	4 %
Some people argue that more nuclear power plants must be built to insure a growing supply of energy, while others think we can meet our energy needs by conservation. Should we:				
Stop building nuclear power plants, or	**50**	**60**	**62**	**70**
Build more nuclear power plants.	26	32	29	26
Uncertain	24	8	9	4
(Number of respondents)	(245)	(418)	(340)	(307)
In the area of environmental cleanup:				
An emphasis on environmental cleanup first, even if companies have to charge more for their products and services, or	**51**	**54**	**61**	**77**
An emphasis on keeping prices lower.	37	43	36	20
Uncertain	12	3	3	3
(Number of respondents)	(245)	(418)	(340)	(307)

Table 4.1: *(continued)*

	Resource Utilization			Resource Preservation
In the area of environmental protection and jobs:	1 %	2 %	3 %	4 %
Maintaining air pollution standards as they are even if some factories have to close as a result, or	**45**	**50**	**57**	**67**
Relaxing air pollution standards to allow factories to stay open.	42	43	37	29
Uncertain	13	7	6	4
(Number of respondents)	(245)	(418)	(340)	(307)

Table 4.1 illustrates quite emphatically the commitment to environmental protection among preservers. Analysis of resource utilizers' preferences on tradeoffs illustrates a more diversified set of priorities. A surprising number of those with a strong resource utilization outlook support "environmental" policy options. Half (52%) of resource utilizers believe that parts of our country should be left in their natural state; another 16% are uncertain. Half (51%) of resource utilizers also believe emphasis should be placed on environmental cleanup even if companies have to charge more for their products and services; 12% are uncertain. Forty-five percent (45%) of resource utilizers support maintaining air pollution standards as they are even if some factories have to close as a result; 13% are uncertain.

In most cases the middle two segments of the growth continuum fall somewhere between the utilizers and preservers in their responses, as their position on the continuum would predict.

The support for environmental policy options on the part of resource preservers provides insights into the nature of past, present, and future policymaking. There seems to be a distinctive philosophy of preservation, defined by a coherent set of beliefs that influence the entire range of critical economic/environmental imperatives. This distinctive philosophy helps to explain some of the tensions involved in making economic-environmental trade-offs, and the impact of the environmental movement.

Growth Orientation and Consumerism

There are also distinct differences in consumer attitudes between the segment of the public showing the greatest tendency toward resource preservation and the segment exhibiting the strongest leaning toward resource utilization. This difference is apparent in the importance members of the two groups attribute to two dozen products of modern technology in terms of their contribution to the quality of their lives. Table 4.2 compares the segments of the growth continuum terming selected items from the list "very important."

Table 4.2: Growth Orientation and Rating of Modern Technology

There has been a lot of talk in recent years about getting "back to nature." At the same time, most of us have come to rely on the products of modern technology. Please tell me how important a contribution you think each of the following makes to the quality of your own life.

	Percent Responding "Very Important"			
	Resource Utilization			Resource Preservation
	1	2	3	4
	%	%	%	%
Wash 'n wear fabrics	48	41	34	28
Automobiles	75	63	56	50
Frozen foods	52	44	38	32
Copy machines	36	27	23	23
Television	35	31	23	21
(Number of respondents)	(238)	(414)	(337)	(307)

Those committed to utilization are clearly more enthusiastic about the contributions of such technologies to the quality of their lives. Committed resource preservers not only exhibit less enthusiasm for these technologies, but are also more cautious in their assessment of the benefits of modern consumer goods in general. Eighty percent (80%) of those in the preserver end of the spectrum believe that the benefits of modern consumer goods are *not* more important than the pollution generated by their production and use, compared with 56% of those at the resource utilizer end (Table 4.3).

An indication that such attitudes among strong preservers inspire more circumspect consumer habits is contained in the finding that the majority (60%) say they try to avoid using disposable products because of environmental concerns, compared with a minority of committed utilizers (44%).

Table 4.3: Growth Orientation and Consumer Perspectives

	Resource Utilization			Resource Preservation
	1	2	3	4
	%	%	%	%
The benefits of modern consumer products are more important than the pollution that results from their production and use: *strongly disagree and disagree*	56	55	69	80
(Number of respondents)	(198)	(401)	(322)	(305)
Avoid using disposable products like disposable razors and lighters	44	53	56	60
(Number of respondents)	(232)	(410)	(336)	(305)

Growth Orientation and Citizen Activism

The attitudes of Americans regarding growth and resource use become of sharper interest when we investigate patterns of citizen activism. Respondents who manifest a commitment to utilization reveal distinctive orientations both to the workplace and to the political arena, which are quite different from those committed to preservation.

Examining responses to questions which measure attitudes toward work, those in the resource utilization segment emerge as significantly more likely to describe their job as very satisfying. A majority (54%) are very satisfied with their jobs,

compared with approximately four out of ten of those in the middle and preservation segments of the growth continuum (45% and 42% of the respondents with a moderate orientation, and 39% of those with a preservation orientation). A clue to the lower level of job satisfaction evident among strong resource preservers can be found in their responses on job priorities. The data reveal that they are more likely to approach their jobs with some frustration, since the group places a higher priority on virtually all job characteristics listed. In importance rankings of job responsibility, challenge, and high salary, those with a preservation orientation are clearly more ambitious than those in the middle or toward the utilization end of the continuum (Table 4.4). Eighty-seven percent (87%) of committed preservers rank responsibility a high priority, compared with slightly less than seven out of ten committed utilizers (69%). Eighty percent (80%) at the preservers' end of the spectrum find challenge important, compared with 58% at the utilizer end. Six out of ten (61%) of those preservationist in their outlook, in percentages similar to the moderate segment of the continuum, underscore the importance of high salary compared to a somewhat lower 47% of those with a utilization outlook. Furthermore, the findings document that even in the critical area of job security there is a distinctive difference between the two ends of the growth continuum: 65% of utilizers rank job security as important compared with 79% of preservers. These differing orientations to the workplace can be at least partially explained by the preservers' inclination to describe themselves as driven individuals, while utilizers in numbers similar to the middle segment of the continuum are more likely than the remaining three segments of the growth continuum to place a high priority on work that makes a contribution to society.

In sum, analysis of workplace priorities reveals utilizers as satisfied and moderated in their temperaments. Preservers, on the other hand, are less content in their work, and more aggressive and demanding in their expectations.

Table 4.4: Growth Orientation and Job Satisfaction

	Resource Utilization			Resource Preservation
	1	2	3	4
	%	%	%	%
How satisfied are you with your current job?				
Very satisfied	54	45	42	39
Somewhat satisfied	37	44	42	48
Somewhat or very unsatisfied	9	11	16	13
(Number of respondents)	(109)	(246)	(197)	(195)
Thinking of your job (on a scale of 1 to 5 with 5 being the most important and 1 being the least important), please tell me how important each of the following aspects of work is to you?				
Importance attributed to: (rank 4 or 5)				
Responsibility	[illegible]	79	84	87
Challenge	[illegible]	67	75	80
High salary	47	63	66	61
Job security	65	78	73	79
Contribution to society	60	67	62	74
(Number of respondents)	(105)	(243)	(194)	(194)
When thinking about your everyday activities, what best describes the type of person you are:				
Driven to achieve your goals	10	11	12	19
Work at a steady pace to achieve your goals	37	32	42	41
Take things as they come	40	43	37	31
Sometimes feel somewhat adrift	13	14	9	9
(Number of respondents)	(241)	(413)	(334)	(305)

A more evenly distributed pattern of activism is evident in preserver-utilizer orientations to public issues and the political arena. While the utilizer population is significantly more involved in the electoral process, the preserver segment more closely follows current events.

As Table 4.5 indicates, more than six out of ten strong utilizers (62%) report they voted in the last local elections compared with five out of ten strong preservers (50%). Similarly, three-quarters (75%) of those at the utilizer end report they voted in the last presidential elections, compared with 65% at the preserver end. While the distribution for responses on the question measuring interest in national elections documents that few Americans are very interested in national elections, committed resource utilizers are most likely to find elections very interesting compared with the other three segments of the population (28% vs. 20%, 19%, 18%). One might conclude preservers reveal a certain cynicism in the low level of interest they bring to voting.

Table 4.5: Growth Orientation and Attitudes toward the Electoral Process

	Resource Utilization			Resource Preservation
	1	2	3	4
	%	%	%	%
Voted in the last local election	62	59	56	50
Voted in the last presidential election	75	68	69	65
Very interested in national elections	28	20	19	18
(Number of respondents)	(244)	(410)	(337)	(304)
People like me don't have any say about what the government does: *strongly agree and agree*	65	63	60	55
(Number of respondents)	(245)	(415)	(339)	(310)

However, despite voting activity, strong utilizers are less likely to feel personally effective in the political arena. Sixty-five percent (65%) of them agree with the statement that "people like me don't have any say about what the government does," compared to slightly more than half (55%) of those with a strong preserver orientation. Preserver participation and interest in public issues described below may well stem from a perception of broader potential influence in policymaking.

Committed resource preservers extend their involvement in politics through signing petitions and discussing current events: 49% at the utilizer end of the scale report having signed a petition compared to 70% at the preserver end. Similarly, 77% of strong utilizers discuss political issues, compared to 95% of strong preservers. Those with a preserver growth orientation feel more confident in the political arena. These respondents are significantly more likely to feel they serve as an opinion leader within their circle of friends on current events: 73% report their friends ask their opinion about current events, compared to 59% of utilizers; 39% feel they are a good source of information about important national issues all or most of the time, compared with 28% of committed utilizers.

Table 4.6: Growth Orientation and Opinion Leadership

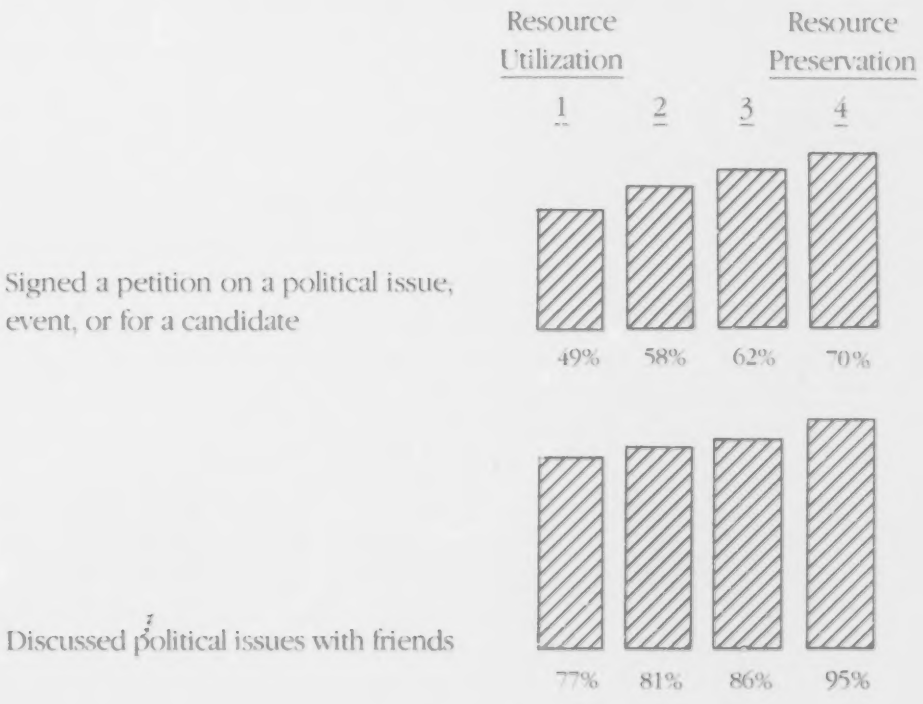
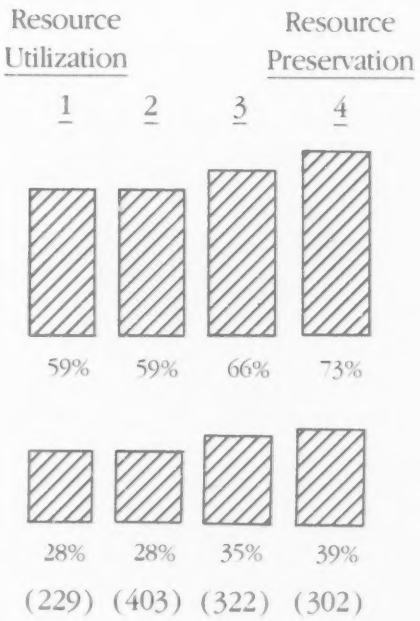


Table 4.6: *(continued)*



	1	2	3	4
Compared with friends, more likely to be asked your opinion about current events	59%	59%	66%	73%
Feel all or most of the time you are a good source of information about important things that are happening today on the national scene?	28%	28%	35%	39%
(Number of respondents)	(229)	(403)	(322)	(302)

In the area of citizen activism, we find significant differences associated with growth orientation. The resource preserver and resource utilizer segments emerge as distinctive groups in their attitudes and behaviors. Consistent with the patterns described in the trade-off discussion detailed in the early part of this chapter, committed utilizers hold less firmly to a distinctive set of beliefs and an aggressive pattern of activity. Committed preservers, on the other hand, are firmly dedicated to pursuing goals in their work, and are self-confident in their individual ability to function in the political arena. Despite the fact that a substantial number of Americans are clustered between these two extremes of the growth continuum and thereby moderate the views of each extreme, still the distinctive differences characteristic of those at the two extremes raise critical questions about directions the nation will pursue in the coming decades. These questions are particularly salient as the preservationist ethic is found to be strong among younger Americans. Some have suggested that as the preserver group ages they may well shift patterns of political activity, voting more and engaging infrequently in less formal political activities.[1] Nevertheless, the survey data suggest that as this generation replaces the older generation of leadership, there will be a profound shift in modes of activism and in national priorities.

1. Ruth Hinerfeld, past president of League of Women Voters, contributed this observation.

Points of Convergence

Despite the differences associated with the growth continuum on many key and fundamental American beliefs, our data demonstrate an underlying consensual bond unifying all Americans. There are many points of convergence that unite Americans, no matter what orientation to growth they hold.

While the utilization perspective can be seen as a logical extension of American historical traditions, the attitudes which accompany the preservationist ethic have incorrectly been associated with "counterculture" liberals. These attitudes, as Burton Yale Pines describes them, include "hostility to capitalism," the "excoriation of technology," and "rejection of economic growth."[2] Our data, however, show vividly that even the Americans most strongly disposed toward preservation are *not* hostile to capitalism, do *not* view technology as a villain, and do *not* emphatically reject economic growth. Furthermore, committed resource preservers demonstrate their independence from a patently "liberal" ideology by favoring less federal government involvement in American life.

Any contention that preservationism is a philosophy antagonistic to capitalism is sharply refuted by comparing the responses of committed preservers and utilizers to questions about the free-enterprise system. There are virtually identical levels of agreement between the two groups that an incentive for private profit is necessary for an economic system to function effectively (88% vs. 85%); and equally emphatic agreement that the United States would not be better off if it moved toward socialism (74% of the resource preserver segment vs. 79% of the resource utilizer segment). (See Table 4.7.)

There are also no sizable gaps between the two groups on their views in science and technology. The vast majority of both the more utilization-oriented and preservation-oriented members of the public believe that we can continue to raise our standard of living through science and technology (79% of utilizers vs. 81% of preservers). Seventy-eight percent (78%) of committed resource utilizers assert that "most problems can be solved by applying more and better technology," compared with 70% of committed resource preservers. And in examining the negative side of sentiment toward innovation, we find that those leaning toward a resource-preservationist outlook are no more likely than those more disposed toward utilizationist views on growth to believe that science and technology often get out of hand, threatening society instead of serving it (75% vs. 78%).

2. Pines, p. 322.

Table 4.7: Growth Orientation and Attitudes Toward Free Enterprise, Science and Technology

	Resource Utilization			Resource Preservation
	1	2	3	4
	%	%	%	%
An incentive for private profit is necessary in order for an economic system to function effectively: *strongly agree and agree*	88	81	86	85
(Number of respondents)	(204)	(387)	(325)	(302)
The United States would be better off if it moved toward socialism: *strongly disagree and disagree*	79	75	85	74
(Number of respondents)	(206)	(385)	(318)	(287)
Through science and technology we can continue to raise our standard of living: *strongly agree and agree*	79	82	85	81
(Number of respondents)	(232)	(403)	(334)	(304)
Most problems can be solved by applying more and better technology: *strongly agree and agree*	78	84	83	70
(Number of respondents)	(232)	(412)	(335)	(303)

Table 4.7: *(continued)*

	Resource Utilization			Resource Preservation
	1	2	3	4
	%	%	%	%
Science and technology often get out of hand, threatening society instead of serving it: *strongly agree and agree*	78	80	80	75
(Number of respondents)	(229)	(413)	(335)	(307)
Ultimately, a spiritual approach to modern problems is more important than a scientific approach: *strongly agree and agree*	79	72	71	59
(Number of respondents)	(228)	(393)	(323)	(294)

The fact that preservationists do not represent a wholesale rejection of economic growth is apparent in the rating the strong preservers give "controlling growth" as an important community issue. In rating eleven goals for their communities, controlling growth was given highest priority by only 14% of the committed preservers and by a comparable 15% of the committed utilizers.

Almost half (49%) of resource preservers feel that their community should continue to grow, compared with two-thirds (66%) of utilizers (Table 4.8). It is intriguing that place of residence is not statistically associated with attitudes toward community growth (Table 4.9). Residents of rural areas and small towns are often ***dependent*** upon growth in order to maintain the vitality of their communities, since the existence of more isolated communities is often economically precarious.

Table 4.8: Growth Orientation and Community Growth

	Resource Utilization			Resource Preservation
	1	2	3	4
	%	%	%	%
Controlling growth in your community: *high priority*	15	18	11	14
(Number of respondents)	(227)	(407)	(332)	(304)
Thinking about new housing and inviting more industry to your community, do you feel that your community: *ought to continue to grow*	66	68	61	49
(Number of respondents)	(233)	(409)	(331)	(302)

Table 4.9: Place of Residence and Community Growth

Thinking about new housing and inviting more industry to your community, do you feel that your community:

	Size of Community				
	Under 2,500	2,500-25,000	25,001-100,000	100,001-1,000,000	Over 1,000,000
	%	%	%	%	%
Ought to continue to grow	60	66	58	58	64
Should not continue to grow	40	34	42	42	36
(Number of respondents)	(288)	(350)	(329)	(198)	(142)

Just as those who place a priority on preservation cannot be accurately depicted as against capitalism, science and technology, and economic growth, they cannot be characterized as "liberal" in the classic sense. This is shown clearly in their responses to questions of government involvement in the economy and social programs. (See Table 4.10.)

The resource preservation and resource utilization ethics involve virtually equal levels of belief that regulation of business by government usually does more harm than good (70% vs. 75%), and show equally strong *disagreement* with the concept that the profits of big business should be controlled by government (65% vs. 60%).

Table 4.10: Growth Orientation and Government Involvement in the Economy

	Resource Utilization			Resource Preservation
	1	2	3	4
	%	%	%	%
Regulation of business by government usually does more harm than good: *strongly agree and agree*	75	78	73	70
(Number of respondents)	(211)	(398)	(326)	(298)
The profits of big business should be controlled by government: *strongly disagree and disagree*	60	62	63	65
(Number of respondents)	(218)	(402)	(327)	(300)

In terms of social programs, those at both preserver and utilizer ends of the continuum believe strongly that Americans should do more volunteer work rather than rely so much on government programs and social services (89% vs. 92%); two-thirds of both groups favor giving more responsibility to states and localities for federal programs such as food stamps and welfare (65% vs. 66%). And committed preservers are no more likely than committed utilizers to believe that the current administration has gone too far in cutting back government programs and services (66% vs. 67%).

Table 4.11: Growth Orientation and Voluntarism, Federalism, and Reaganism

	Resource Utilization			Resource Preservation
	1	2	3	4
	%	%	%	%
American citizens should do more to help each other through volunteer work instead of relying so much on government programs and social services	92	94	93	89
(Number of respondents)	(237)	(411)	(337)	(305)
Favor giving more responsibility to states and localities for Federal programs like food stamps and welfare	66	74	67	65
(Number of respondents)	(220)	(393)	(322)	(303)
The current administration has gone too far in cutting back government programs and services	67	68	59	66
(Number of respondents)	(221)	(408)	(337)	(305)

In his well-respected book, *History of the Idea of Progress*, Robert Nisbet worries that progress may be "at bay" in the America of today. Noting that progress is historically linked with economic growth, Nisbet laments anti-growth sentiment in the nation, saying:

> Very much implicated in the spreading disillusionment with economic growth is fear of scarcity, of depletion of the resources of the earth, the seas and the atmosphere which are crucial to economic growth... For perhaps the first time in two millennia there are enough intellectuals convinced of the hopelessness of our population-consumer resources problems to communicate to an even larger number of people the futility of hopes for human progress.[3]

Our findings suggest that concern for our national resources is not causing a widespread or intensive disillusionment with economic growth. The correlation we have described between resource preservation, participation, and leadership as well as the *noncorrelation* between preservationism and negative views of science and technology and our free-market system does not lead to the conclusion that there is a feeling of "hopelessness" either regarding the earth's resources or human progress.

It appears that those Americans with a strong preservation orientation are not advocating "futility" or "no-growth." What they are advocating is a re-envisioning of approaches to progress and growth. This re-envisioning does not pit "liberals" against "conservatives." This process of redefinition is perhaps best illustrated by Republican Congressman Jack Kemp in his book *An American Renaissance*, where he distills what he means by the word *growth*:

> Growth must be fought and prevented, according to the New Malthusians, otherwise the planet will be stripped clean to provide the handful of humanity that resides in North America with three-car garages. This isn't what I mean by growth... Inflated growth means *quantity* growth. Real growth, the kind that must be promoted if democratic capitalism is to survive, is *quality* growth. The difference is crucial. Quantity can only grow at the expense of the planet. Quality is a boundless concept.[4]

3. Robert Nisbet, *History of the Idea of Progress* (New York: Basic Books, 1980), pp. 337-339.

4. Jack Kemp, *An American Renaissance: A Strategy for the 1980's* (New York: Harper and Row, 1979), p. 7.

Thus we see both utilization and preservation orientations which coexist with basic American values while exerting a clearly discernible force on them. If, as our findings suggest, the preservationist perspective becomes more of a force in American life in the coming years, it will not be a force urging an end to growth. Rather it is likely to be a voice calling for *responsible* progress and *quality*, not quantity, as a measure of true growth.

Chapter Five

Regional Response to Growth Priorities

Smyrna is looking forward to expansion, growth, a better way of life, and a high standard of living. We've got backhoes, pans, bulldozers, and everything else here. The place is growing and booming and people are employed.

SAM RIDLEY
Mayor of Smyrna, Tennessee

I grew up in Pennsylvania and saw the acid streams down there and the strip mining, and I really believe that we must and can protect the environment. It is something you can chew up and tear up very easily, but it takes an awful lot of work to put it back the way it should be.

JAMES E. GRIFFIN
President and Chief Executive Officer
Central Vermont Public Service

Introduction

At the local level, we find a great deal of conflict and confusion on how to balance economic and environmental priorities. Communities have different points of view on national policies and the way in which growth will affect the lives of their citizens. When attitudes towards national policy are translated to local problems, tension becomes more acute. Our research makes it clear that it is easier to support trade-off decisions on an abstract basis, with broad and diffuse implications, than locally, where decisions are more likely to have an immediate effect on people's lives.

Specific issues such as factory closings, reasonably priced energy, and land development have a dramatic impact on the lives of town residents. Trade-off judgments in these circumstances are perceived quite differently from general economic-environmental policy options. This chapter will examine how people at the community level and in different regions of the country establish priorities and approach the question of how to make trade-off decisions that will affect their personal lives.

Regional Opportunity: Growth Issues

During the past decade, growth in the United States has differed widely depending upon the region of the country. These differences have created an impression of prosperity in the Sun Belt states, and diminished expectations in the older cities of the industrial Northeast. Inequities in personal and public resources have a significant bearing on a region's growth rate. Uneven resource distribution confronts each region with its own set of problems, which in turn strongly influences growth strategies. Many southwestern cities, for example, have experienced substantial growth due to their proximity to sources of natural wealth, and to what many feel is a superior quality of life. Northeastern cities, on the other hand, have suffered a serious deterioration of their tax base as their middle class moves to more growth-oriented regions.

Economic statistics clearly define regional differences. Although personal income increased by 7.3% nationally over the period May 1981 to May 1982, the Pacific states have experienced a 10.8% increase, while states in the Middle West region have experienced only a 4.4% increase (Table 5.1).

New patterns of population movement have also emerged over the past decade. Migration to the Sun Belt and western states has produced a new set of problems for these sections of the country. While the Middle Atlantic states lost slightly more than 1% of their populations, the West South Central region gained 23% and the Mountain states experienced a 37% increase.

In many regions it is apparent that growth can threaten future prosperity and destroy the quality of life which attracted new residents and industry in the first place. In other areas, lack of opportunity is causing large numbers of young people to move out of the state, jeopardizing the future vitality of the community. It is increasingly clear that communities all over the country are starting to cope with the consequences of change. Many are making deliberate decisions to plan and direct the kind of growth which will enable them to achieve clearly formulated goals.

Table 5.1: Regional Statistics

	Population	1970-1980 Population Change	Rise In Personal Income May 1981 to May 1982[1]	Percent of Total Sample
		%	%	%
Pacific	31,797,000	+19.8	+10.8	13.7
Mountain	11,368,000	+37.1	+ 8.8	4.7
West South Central	23,743,000	+22.9	+ 9.4	9.8
Middle South	14,633,000	+14.5	+ 5.1	6.1
South Atlantic	36,943,000	+20.4	+ 5.8	17.3
Middle Atlantic	36,788,000	− 1.1	+ 6.9	20.2
New England	12,248,000	+ 4.2	+ 7.4	6.0
Middle West	41,670,000	+ 3.5	+ 4.4	20.2
North Central	17,184,000	+ 5.2	+ 9.1	9.1

1. Source: *Business Week*, 27 September 1982, p. 114.

The Tensions Underlying Personal Trade-Off Decisions

More than four out of ten (44%) Americans do not live in the community in which they were raised (Table 5.2). Only 28% of respondents living in the Mountain region and 29% of those in the Pacific region live where they were raised, as opposed to 52% in the Middle West and 48% of New Englanders. A job opportunity is the most frequently cited reason for moving, with 39% selecting this option. It is, however, surprising that close to one-quarter (23%) indicate they have moved for quality of life reasons – fewer urban problems such as crime and pollution or a more peaceful environment (Table 5.3). Mobility patterns among Americans suggest that the traditional quest for opportunity which has encouraged national migration since the founding of the nation continues today. Opportunity is defined in terms of economics and quality of life and is a key factor in determining where people choose to live.

Table 5.2: Staying Close to Home and Region of the Country

Do you live in the community where you grew up?

	Yes	No	(Number of Respondents)
	%	%	
Middle West	52	48	(259)
New England	48	52	(77)
North Central	48	52	(119)
Middle South	46	54	(78)
West South Central	46	54	(125)
Middle Atlantic	45	55	(175)
South Atlantic	43	57	(221)
Pacific	29	71	(169)
Mountain	28	72	(61)
General public	44	56	(1284)

Table 5.3: Reasons for Moving

What best describes the reason for your most recent move (if you do not live in the community where you grew up)?

	%
Job opportunities	39
Marriage	17
More peaceful environment	17
Self-fulfillment	11
Fewer urban problems, such as crime and pollution	6
Need to be independent	5
To go to school	5
(Number of respondents)	(604)

As discussed in Chapter One, Americans perceive economics as having a greater effect than environmental concerns on one's personal life. While seven out of ten (70%) respondents report that their families have been hurt by the current recession, only slightly more than a third (35%) report that pollution is affecting their lives (Tables 1.2 and 1.8). The degree to which people identify with economic versus environmental problems is confirmed when we examine personal involvement in community organizations. We find the public is least likely to belong to local environmental groups as compared to membership in other organizations. Only 8% report belonging to environmental groups, while one-quarter (23%) belong to business or civic groups and 52% report participation in church groups (Table 5.4).

Table 5.4: Membership in Community Organizations

Do you belong to any of the following types of community organizations?

	Yes	(Number of Respondents)
	%	
Church-connected groups	52	(1310)
Charitable or volunteer organizations or community centers	37	(1310)
Neighborhood improvement associations	25	(1310)
Business or civic groups	23	(1310)
Fraternal organizations or lodges/ veterans organizations	19	(1310)
Political clubs or civic groups	12	(1310)
Environmental groups	8	(1310)

However, while the majority of respondents do not perceive pollution as a personal threat, environmental concern remains a vital community priority. As Table 5.5 illustrates, litter and pollution problems rank high on the list of community priorities: Seven out of ten people (70%) rank litter reduction important; close to six out of ten (57%) judge reducing pollution to be a high priority, just as many as gave that rating to cutting taxes (57%). In spite of the public's high ranking of environmental priorities, controlling growth is not a major concern. In fact, limiting growth trails the list of priorities, supported by slightly less than four out of ten (39%) Americans. In a period of recession and reduced government funding, social and economic goals are likely to appear especially remote and the balance between economic and environmental concerns more difficult to maintain.

Table 5.5: Community Priorities

General public importance ranking.

	High Priority[2]	Number of Respondents
Reducing crime	84%	(1310)
Improving the schools	76%	(1310)
Litter control	70%	(1310)
Sense of "neighborliness"	67%	(1310)
Reducing pollution	57%	(1310)
Cutting taxes	57%	(1310)
Public land for parks	56%	(1310)
Library and cultural centers	51%	(1310)
Improving transit	49%	(1310)
Rebuild downtown areas	40%	(1310)
Controlling growth	39%	(1310)

2. "High Priority" includes responses 4 and 5 on a 5 point scale

Localities cope with their own particular stresses and growth problems by establishing different sets of priorities. It is not surprising, therefore, that most Americans support the current administration's policy of returning power to the state level and reducing the size of the federal government. Two-thirds (69%) of respondents favor giving more responsibility to the states and localities for programs presently funded by the federal government.

Since key community decisions on growth may increasingly be made on the local level, it is important to study public attitudes on local trade-off choices. In the next decade, the meaning of responsible growth in different regions may vary considerably depending on where each region stands in regard to resource utilization and resource preservation.

Regional Perspectives on Growth Issues

Regional economic and social diversity cause some states to focus on economic issues, while others focus on quality of life.

The survey findings document distinct differences among the nine census regions. This becomes apparent in the varying regional scores on a utilization-preservation growth continuum. This index of growth perspectives provides a valuable measurement of public reactions to the different rates of growth experienced regionally in the 1970's. In addition, as growth rates are expected to remain high in the Sun Belt throughout the 80's and low in other parts of the country, responses on the growth orientation index indicate how populations in different regions are likely to make their trade-off choices in the years ahead.

The Middle South region—Kentucky, Tennessee, Mississippi, Alabama—gives a high priority to the growth ethic. It is the region with the strongest utilization perspective and therefore most likely to endorse an intensive growth effort. New England and Pacific states, on the other hand, are least likely to manifest a utilization outlook. About one-third (34%) of the respondents from the Middle South region exhibit a utilization orientation, compared with only 12% and 13% of New England and Pacific respondents. The Middle West scores in the center of the continuum. The regions most likely to be preservationist are the Mountain (35%) and the New England (32%) states (see Table 5.6). These regions are more likely to choose a more constrained and protective growth strategy.

Table 5.6: Growth Orientation and Region of the Country

These differences in growth outlook contrast with the similarity of the nine regions in demographic characteristics. Age, education, and income do not differ significantly among the nine census regions (see Appendix).

Regional attitudes concerning future community growth are consistent with the growth outlook continuum. Eight out of ten (80%) residents of the Middle South, a

region which shows a strong utilization tendency, support further development in their communities. These figures contrast sharply with the bare majority (51%) of Pacific respondents who endorse continued growth in their home towns. It is especially interesting to note that Southern California, long a prototype of Sun Belt expansion, today embraces a more conservative growth policy. The sentiment is clearly one of deceleration and slower growth.

Analyzing preservationist sentiment, we find residents of the Mountain states and New England among the more preservationist in outlook. These regions confirm the preservationist preference for constrained growth: 44% and 42% of the respondents in these states oppose new housing construction and industry development in their communities (Table 5.7).

Table 5.7: Community Growth and Region of the Country

Thinking about new housing and inviting more industry to your community, do you feel that your community:

Regional Response	Ought to Continue to Grow	Should Not Continue to Grow	(Number of Respondents)
	%	%	
Middle South	80	20	(77)
Middle West	67	33	(250)
North Central	67	33	(117)
West South Central	65	35	(123)
Middle Atlantic	59	41	(171)
New England	58	42	(75)
Mountain	56	44	(59)
South Atlantic	55	45	(219)
Pacific	51	49	(162)
General public	61	39	(1279)

Regional Perspectives on Community Priorities

Close to seven out of ten responses (67%) in communities in the Pacific region place a high priority on controlling pollution, while slightly less than five out of ten (49%) of those in the Middle South states rank pollution as a high priority. Similarly, these same southern states—Kentucky, Tennessee, Mississippi, and Alabama—are among the states *least* likely to support controlling growth with slightly more than a third (35%) ranking "controlling growth" a high priority, compared to close to half (47%) of those in New England.

Table 5.8: Community Priorities and Region of the Country

Tend to place a high priority on:

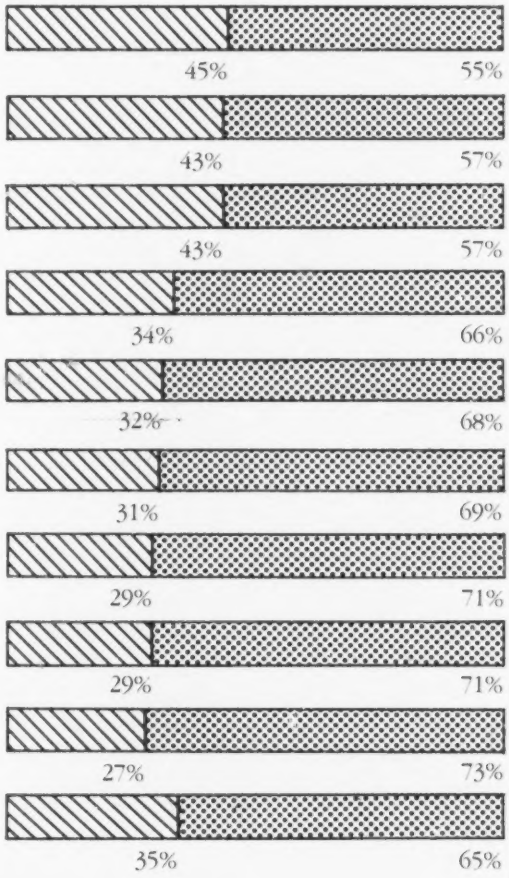
Regional Response	Controlling Growth	(Number of Respondents)	Reducing Pollution	(Number of Respondents)
	%		%	
Pacific	37	(166)	67	(166)
Middle Atlantic	41	(168)	64	(175)
West South Central	42	(122)	61	(119)
New England	47	(75)	61	(77)
South Atlantic	44	(219)	58	(220)
Middle West	40	(249)	53	(259)
North Central	34	(115)	51	(116)
Mountain	44	(61)	49	(60)
Middle South	35	(77)	49	(73)
General public	40	(1275)	58	(1290)

There are regional differences concerning the perceived effect of pollution on people's lives. More than four out of ten people who live in the Pacific. Middle Atlantic, and New England states report that pollution has an impact on their lives, while only three out of ten people who live in the Mountain states, the West South Central region, and the Middle South identify pollution as a personal concern (see Table 5.9).

Table 5.9: Pollution Affecting Personal Activities and Region of the Country

Thinking now about your own activities, do you feel that:

Regional Response	Pollution Is Affecting Your Life	Pollution Is Not Affecting Your Life	Number of Respondents
Pacific	45%	55%	(169)
Middle Atlantic	43%	57%	(175)
New England	43%	57%	(74)
South Atlantic	34%	66%	(220)
Middle West	32%	68%	(256)
Middle South	31%	69%	(79)
West South Central	29%	71%	(125)
Mountain	29%	71%	(61)
North Central	27%	73%	(115)
General public	35%	65%	(1273)



The level of pollution found in the separate regions of the country cannot be considered the determining factor of these attitudes. The Sun Belt cities have experienced tremendous growth over the past decade and many communities in this region are now facing serious environmental problems for the first time. Phoenix, a city in the Mountain region, faces inadequate transportation arteries, shortages of water, and air pollution problems. The lack of zoning and effective city planning finds Houston choking on its explosive growth. Yet residents in these regions are less likely than those in other regions to feel pollution is personally affecting them.

The Middle South is also most likely to favor increased land use over keeping land "untouched," energy production over environmental protection regulations, and lower-cost fuel over low-lead fuel. These responses contrast with New England's responses. Twenty-seven percent (27%) of those in the Middle South favor using all land compared to 15% of those in New England; 47% of those in the Middle South support increased energy production versus 29% of those in New England; and 26% of those in the Middle South endorse lower cost fuel as opposed to only 11% of those in New England.

Table 5.10: Trade-offs and Regions of the Country

Regional Response	Use all land over keeping some land untouched	Number of Respondents
Mountain	40%	(61)
South Atlantic	35%	(221)
Middle West	31%	(259)
West South Central	30%	(125)
Middle Atlantic	28%	(175)
Middle South	27%	(79)
Pacific	26%	(169)
North Central	20%	(119)
New England	15%	(77)
General Public	29%	(1310)

Table 5.10: *(continued)*

	Increase energy over maintaining environmental regulations	Number of Respondents
Middle South	47%	(79)
Middle West	39%	(259)
Middle Atlantic	38%	(175)
Mountain	36%	(61)
Pacific	34%	(169)
South Atlantic	32%	(221)
North Central	29%	(119)
New England	29%	(77)
West South Central	28%	(125)
General Public	35%	(1310)

In order to explore the implications of these data, and the manner in which choices are being made on the local level, we have conducted in-depth interviews in five communities—Seattle, Washington; Columbus, Ohio; Montpelier, Vermont; Phoenix, Arizona; and Smyrna, Tennessee. These case studies illustrate the different attitudes toward change found in different regions of the United States and provide insight into how individual communities are meeting the challenge of responsible growth.

Table 5.10: *(continued)*

	Lower-cost fuel over low-lead fuel	Number of Respondents
Middle South	26%	(79)
West South Central	19%	(125)
Middle West	17%	(259)
North Central	16%	(129)
Middle Atlantic	15%	(175)
South Atlantic	14%	(221)
Pacific	14%	(169)
New England	11%	(77)
Mountain	8%	(61)
General Public	16%	(1310)

Chapter Six

Environmental-Economic Trade-Offs: A Community Decision

Introduction

The first five chapters of this report have illuminated the manner in which the American population is coping with economic and environmental trade-offs. Every community in the United States has its own problems associated with growth and its own proposed solutions. Since the unique character of these individual situations does not emerge in a national survey, we have conducted five community case studies representing different regions of the country. The studies illustrate how the national consensus on the importance of progress *and* environmental quality is translated into the local decision-making process.

In each of the five communities, top political, business, environmental, media and civic leaders were interviewed. In each case, their economic and environmental perspective was consistent with the point of view expressed by members of the public in the community's particular region. We found, for example, that Vermont residents are most likely to endorse a preservation orientation, while those living in Smyrna, Tennessee have the strongest utilization perspective. This is in keeping with the findings illustrated in Chapter Five that New England is the region with the least amount of utilization sentiment, while the Middle South shows the greatest utilization orientation.

In addition to representing its region, each community has experienced a different level of growth and will therefore be facing different dilemmas in the 1980's.

Smyrna, Tennessee

The Middle South Region

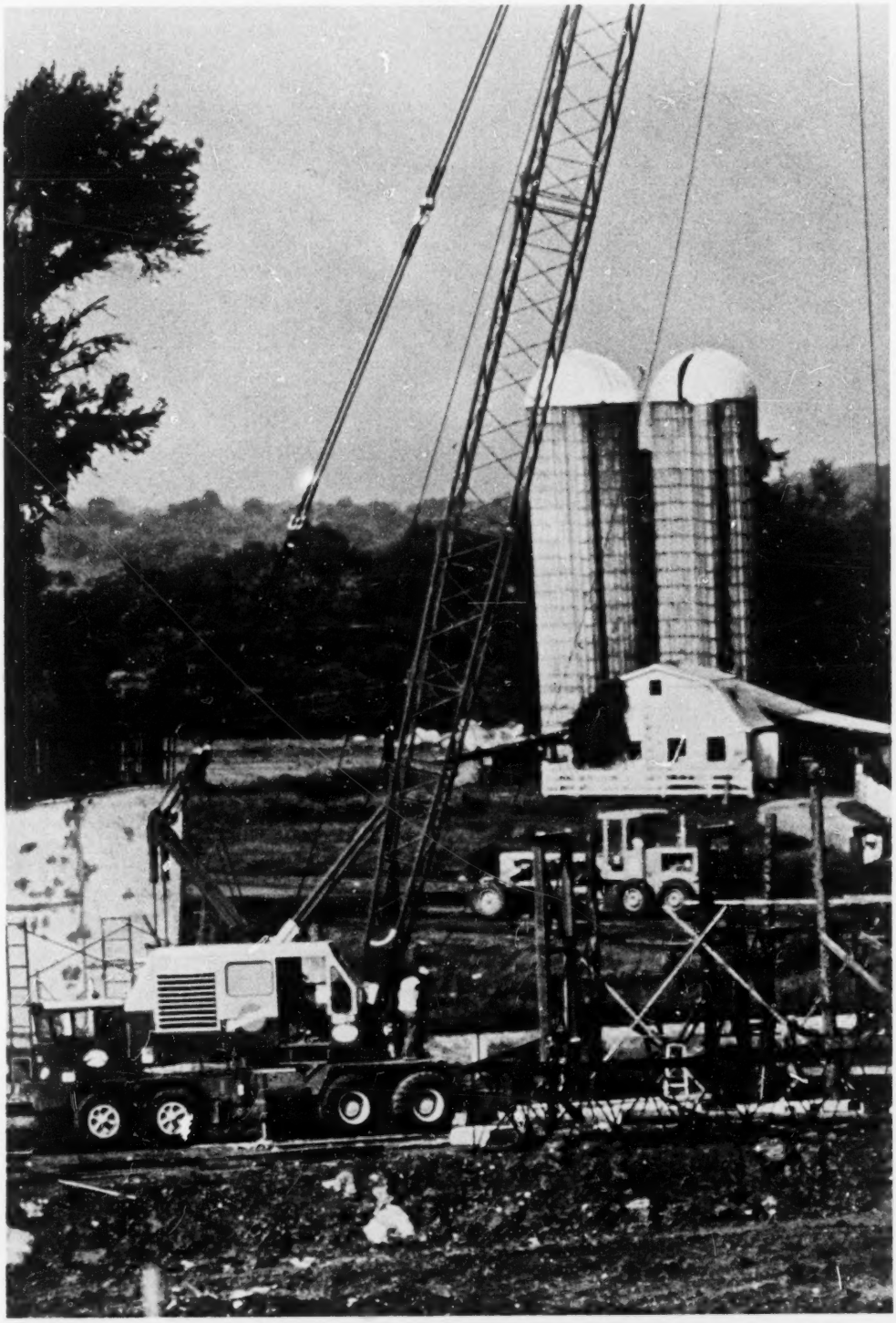
- Residents are oriented toward utilization.
- Residents support housing and industry development in their community.
- Residents favor comprehensive land use, energy production, and low-cost fuel over the low-lead alternative.

Issue:
Explosive economic growth stemming from construction of a new, Japanese-owned Nissan truck assembly plant located in a traditional, Southern rural community.

Progress and Change: Determined Growth

For the past several years, economic security had remained just out of reach for many Smyrna, Tennessee residents. At one time, many residents found jobs at the U.S. military base, which provided a steady level of employment until it closed in 1970. "For a while there, we thought Smyrna would be a ghost town," says longtime resident Don Kemp, currently employed as visitor control coordinator for the Nissan-Datsun plant now under construction. Smyrna has changed, and anticipations are that a lot more change is on the horizon.

The decision of Nissan-Datsun of Japan to invest in the rural hinterlands of middle Tennessee has infused this small town with expansive expectations. In addition, it has brought together an odd juxtaposition of rural Southern values and Japanese management techniques. The Nissan plant, a $500 million facility, will be the largest Japanese investment in the United States. Employment opportunities will explode when the Nissan plant begins full-scale operations in August 1983. Satellite plants supplying parts for the Nissan truck operation will further increase available jobs in Rutherford County. While Nissan will employ approximately 3,000 people, more than double that number are expected to find jobs in non-related service businesses. These figures are astounding, as the number of jobs created will exceed the total estimated available labor force for the entire county. With population predictions forecasting a 56% population increase by 1990, and another 28% increase by 1995, town residents are bracing themselves for a rapid influx.



Nissan plant road construction through the Brewer Milkstar farm, Smyrna, Tennessee.

An Uneasy Grip on Quality of Life

In a time of economic uncertainty, Smyrna is a town which has it made. Mr. Kemp reflected: "Just a year and a half ago you couldn't find a hamburger unless you went home and cooked it yourself. Now you can buy it in any one of a half a dozen places."

Below the surface, however, residents have an uneasy feeling. For many decades close family ties and strong churches have been traditions embedded in the Smyrna way of life. Farm families pass their farms down from generation to generation. The community is intimate, and growth threatens this intimacy. There is intense concern among Smyrna residents that the appearance of Wendy's, Arby's, and McDonald's heralds more than fast food, and that commercial development, increased traffic and the influx of new town residents will abruptly end the security and solitude that has characterized this town. But despite hesitations, residents doggedly support "progress."

The Nissan plant has introduced substantial change in the lives of Mary Lisabeth and Charles Hodge, whose families have lived in the Smyrna area for as long as anyone can remember. For a couple in their seventies who saw a section of their farm condemned by Nissan road construction, the plant has caused some bitterness. However, in a manner characteristic of other town residents, criticism of the sudden growth is tempered by a desire for jobs and opportunities for young people. "I want people to have jobs...but this plant is just too big for a small town like Smyrna," according to Mrs. Hodge. The question of what constitutes responsible growth and progress troubles many residents as they foresee acres of prime grazing land developed into modern shopping malls, new schools, widened streets and dozens of housing subdivisions.

Japan Inc. Comes to Town

Mixed emotions stem partially from community response to the plant as a representative of the Japanese threat to American enterprise and self-reliance. The Middle South region of which Smyrna is a part is the most likely of any region in the nation to embrace a "buy American" attitude. In considering purchases, 66% of the residents of the Middle South consistently state they would choose an American product over a lower priced alternative, compared with 46% in the Pacific region. Respondents in this region are also most likely to feel imported

products should be taxed: 87% of Middle South residents support an import tax, compared to 71% of those in the Middle West, the region which suffers most from foreign car competition. (See Table 6.1)

Table 6.1: Attitudes toward Imports and Region of the Country

Do you generally buy products made in this country over lower priced alternatives:

Regional Response	Yes	(Number of Respondents)
	%	
Middle South	66	(166)
New England	59	(73)
North Central	55	(115)
Middle West	54	(257)
Middle Atlantic	53	(171)
Mountain	52	(60)
South Atlantic	51	(219)
Pacific	46	(166)
West South Central	43	(123)
General Public	53	(1258)

Do you believe imported products should be taxed to offset lower wage scales and other competitive differences?

Regional Response	Yes	(Number of Respondents)
	%	
Middle South	87	(73)
Mountain	83	(53)
South Atlantic	77	(210)
Pacific	73	(159)
North Central	72	(102)
Middle Atlantic	72	(165)
Middle West	71	(244)
West South Central	70	(118)
New England	69	(75)
General Public	74	(1197)

Undeniably, the Japanese endeavor is infusing Smyrna's economy with new vitality. Countering criticism of the Japanese foreign influence is the fact that the lightweight trucks assembled in Smyrna will be made *in America*. However, there is a distinct undercurrent of sentiment which questions Japan, Inc.'s coming to Smyrna, Tennessee.

When the plant is completed, the number of Japanese employees will be very few. In contrast, there are now numerous Japanese consultants performing such functions as the installation of robots programmed to spray paint, weld, and perform complex design work. In addition, those who will be working at the plant have been flying to Japan in waves for training periods which extend from 6 weeks to 6 months.

Tennessee residents, many of whom have never left the state, buddy up with a Japanese counterpart in factories in Osaka and Kyushu. There is more than technical experience to be learned from the Japanese, according to Denny Sheets, a Smyrna resident who left to work for 15 years in Detroit's auto industry, and now will be employed at Nissan. "In Japan I saw how people feel about their work. Without going to Japan I couldn't see it...people come in and their goal for the day is to build the best car available...we've seen it work and it can be done here."

Even now, at the temporary Nissan trailer quarters the Japanese experience is very strong and many employees voluntarily join in the 7:30 a.m. morning exercises, as well as wear the company uniform. Workers also support the non-union position which Nissan has emphatically put forth. Even the construction crews building the plant are non-union. However, this unlikely marriage of Japanese management and traditional Southern sentiment promises to bring some surprising contrasts to Smyrna.

Trade-Off Decision

While some residents turn a wary eye to what they view as a Japanese intrusion in their town and others bask in nostalgic reflections, Smyrna is evolving into somewhat of a commercial center. As Smyrna pursues growth, is the welcome mat out to all companies? Not at all, according to James Buck, chairman of the Governor's Task Force on Small Business. Speaking of economic development in the state, Mr. Buck noted that business must meet a clear set of standards:

> We welcome industry, but we wouldn't accept just anyone. Let's make sure that the quality, the service, the management is compatible with the quality of life we have in Tennessee. And in some cases, where it's just incompatible, we'd be better off to just say, thanks, but we think we'll pass.

In fact, the company which will supply Nissan trucks with foam seats is reportedly locating its production division elsewhere due to disagreements over environmental controls. Mr. Buck continues: "There are trade-offs, there have to be trade-offs...but it would be a collaborative effort... The people have to determine where the trade-offs are going to be." These remarks were echoed by members of the Chamber of Commerce for Rutherford County in discussions concerning Nissan and the incoming plants which will serve Nissan's truck operation. There is a distinct perception that ten to twenty years ago communities were much less selective and demanding of industry. Today, in contrast, communities can be expected to grant few concessions, particularly in the area of the environment.

Sam Ridley, mayor of Smyrna for 30 years and an aggressive participant in the Nissan negotiations, emphatically voiced his commitment to growth: "Communities have to grow if they want to stay healthy. If they stand still they mildew or rot. The Nissan plant creates opportunities for the children of families that have lived here for generations."

Charting the Future

Smyrna must plan to prevent the loss of quality now apparent in many small towns in the state. Similar rural towns in Tennessee will watch its strategies and its successes. Predictions suggest that 20 million people will move to the Sun Belt states in the next 10 to 20 years. Tennessee is one of the three states that may receive the bulk of the development.

What is the strategy currently outlined to foster a quality growth pattern? Despite the rapid development looming on the horizon there are no clear plans for either restrictive zoning or long-range development planning. John Saucier, president of the Tennessee Environmental Council, suggests that small towns like Smyrna may not have the organizational or planning capabilities to handle traffic, school, water supply, labor supply, and waste disposal problems, among others, which will emerge from Nissan and spin-off commercial development. Even today, sewage treatment

is inadequate. Heavy rains create flash floods and reading water meters can mean standing in three-quarters of a foot of raw sewage. But as Saucier states: "You'll see the problems developing first and then the solutions later."

Undoubtedly, Smyrna will face some difficult dilemmas, but there is a good working relationship between environmentalists and businessmen in the state, according to Saucier.

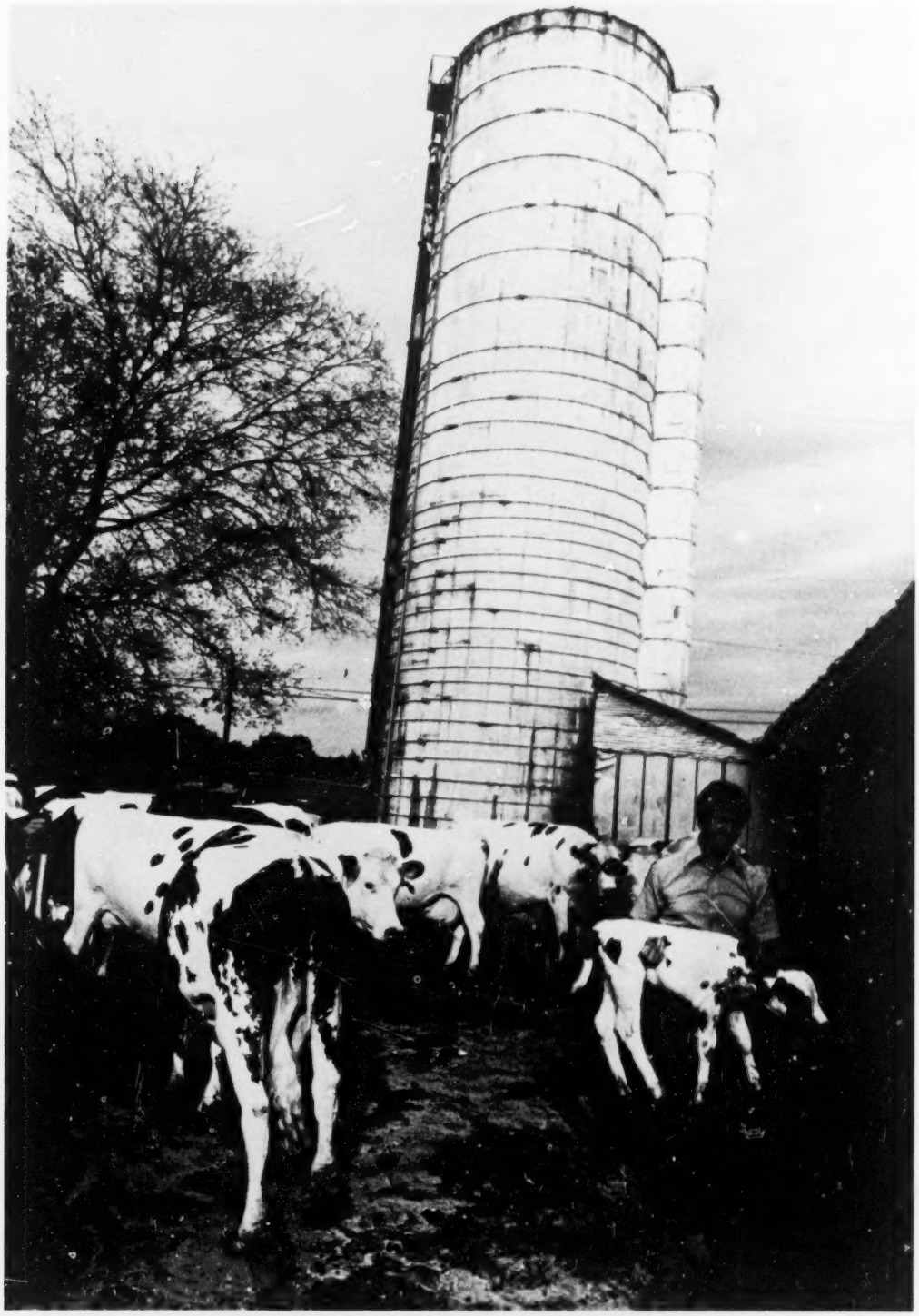
One difficulty will be the effort to locate a toxic waste site to serve the influx of industries into the Smyrna area. Paradoxically, an illegal hazardous waste disposal site stands not more than one-half mile from the Nissan plant construction. Actions against the waste disposal company are still being litigated in the courts, and petrochemicals continue to contaminate the water table. Nissan is currently investigating the options available in both solid and hazardous waste disposal. As Douglas Miller, senior engineer for solid waste, pointed out, "We don't yet know what kind and how much waste we will have."

Tennessee faces a critical problem as the largest producer of toxic wastes in the Southeast, and with not one secure landfill in the state. Efforts to select a site have met with bitter opposition from local residents. Wastes are currently stored or trucked across state lines to Alabama. With the advent of industrial development, secure sites will have to be developed. Geological formations indicate that there may be few suitable locations. Communities adjacent to these areas will have to address this problem realistically, which will entail bringing the citizens into the decision-making process. Communication may thus serve as the key to furthering manageable growth.

Smyrna will have to resolve the extent to which its growth will include expansive development, restrictive zoning, or protection of agricultural land. Local residents evince a firm belief in self-reliance, emphasizing their preferences for local community decision-making. State officials respect this and emphatically proclaim they will not adopt the "arrogance of Big Brother in Nashville deciding what's best for the folks."

In Smyrna, it is apparent, there are some difficult trade-off decisions ahead in which economic growth will abruptly clash with environmental quality. However, as Mr. Kemp at the Nissan plant commented, "Things are looking up, we're going to get a lot out of this."

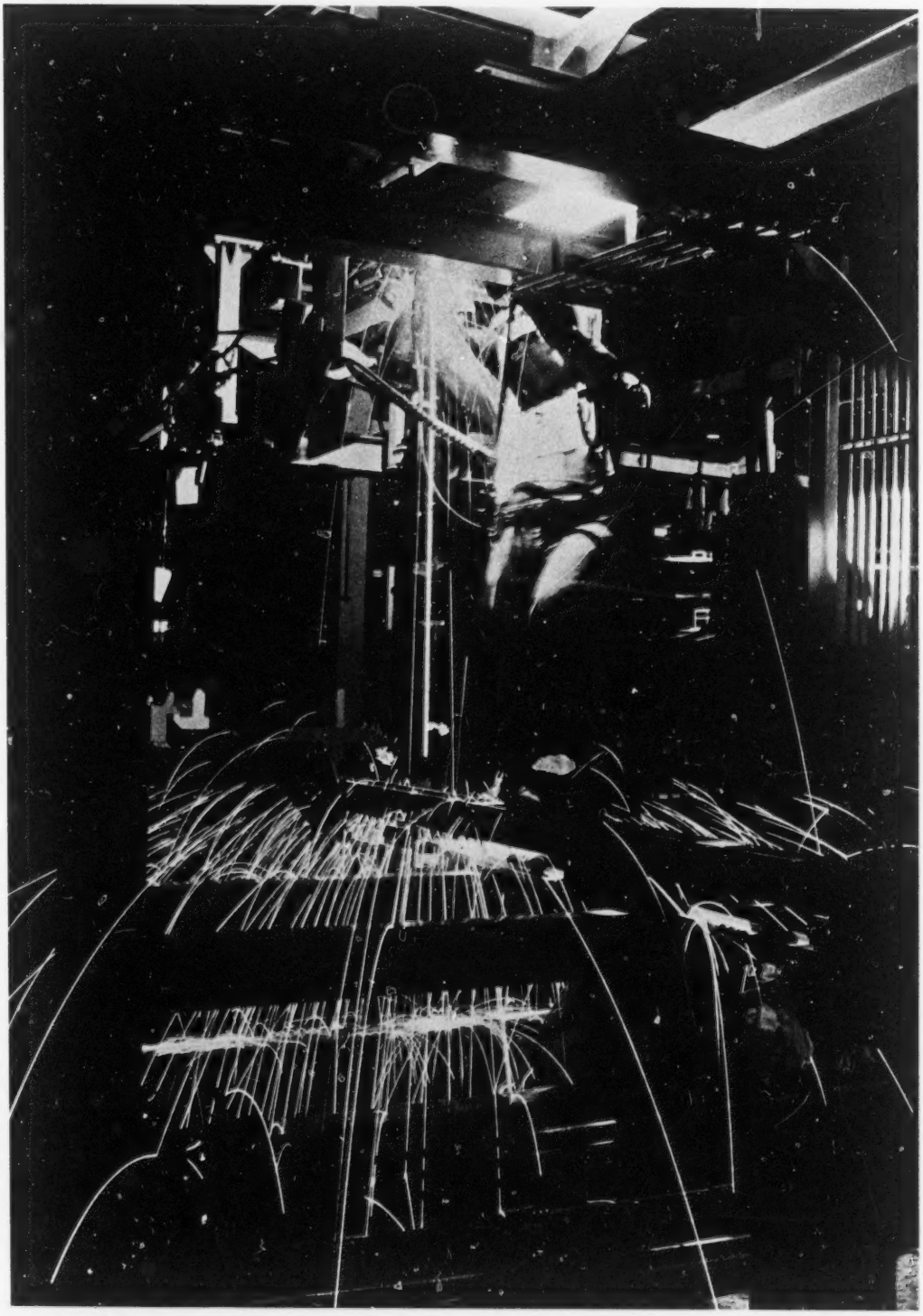
Photojournalist Ethan Hoffman participated in the Smyrna, Tennessee case study and took the following photographs.



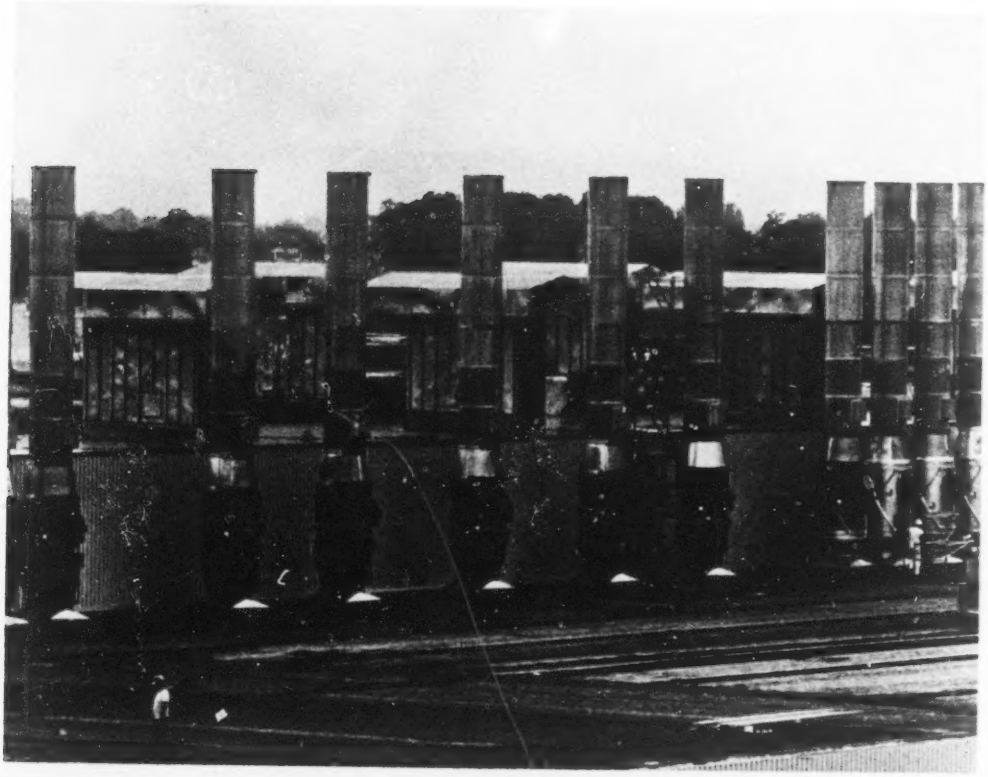
Milking time, Harold Lee's Farm, Smyrna, Tennessee.

Nissan Plant Training Facility, Smyrna, Tennessee.

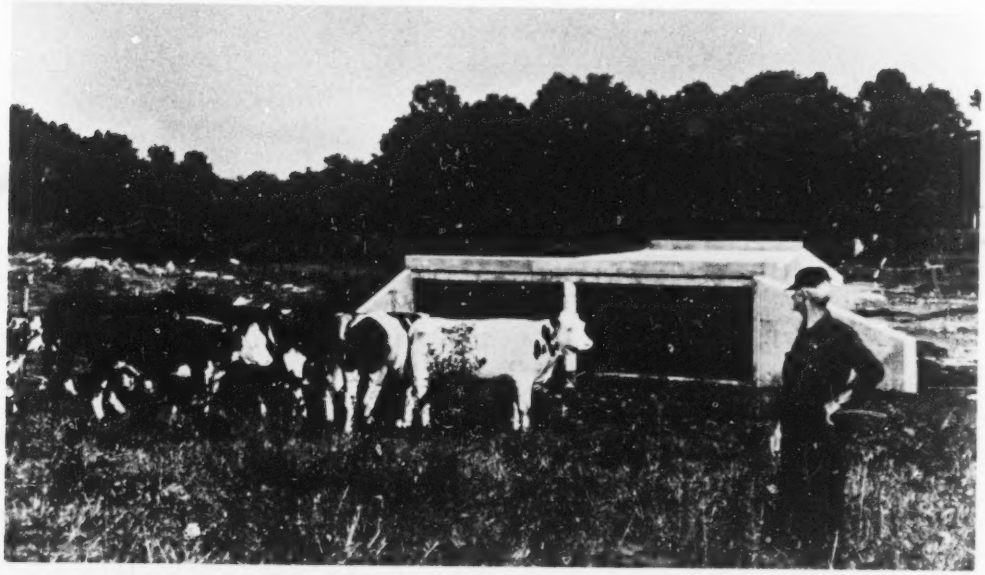
Mayor Sam Ridley in front of Nissan plant construction, Smyrna, Tennessee.



Construction inside Nissan plant, Smyrna, Tennessee.



Nissan plant paint division smokestacks, Smyrna, Tennessee.



Nissan plant road construction through Harold Lee's farm, Smyrna, Tennessee.

Charles and Mary Lisabeth Hodge, retired farm couple, Smyrna, Tennessee.

Phoenix, Arizona

The Mountain Region

- Residents are most likely to believe pollution is affecting their lives.
- Residents place a low priority on controlling pollution.
- Residents are likely to favor land development over preservation.

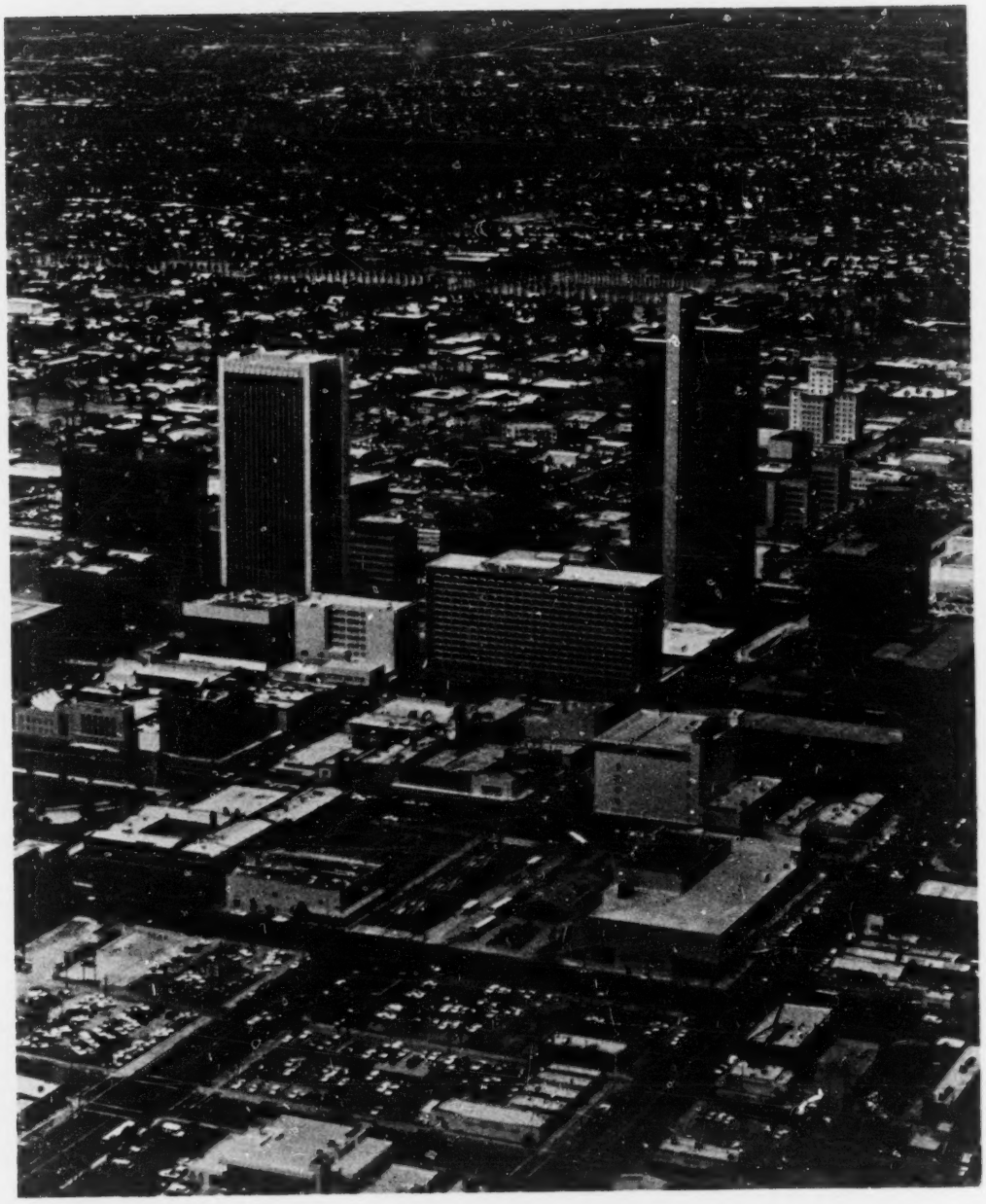
Issue:
Population has grown about 500% in the past three decades, with virtually no mass transit system, increased auto emissions have caused serious air pollution problems; a lack of planning seriously jeopardizes Phoenix's water supply.

Managing Explosive Growth

Phoenix's population growth over the last 30 years has been meteoric, rising from 331,770 in 1950 to 1,509,052 in 1980. Phoenix is now Arizona's largest city. With an expected doubling of the population by the year 2010, the city continues to pursue economic development and growth. But the quality of life which drew people to Phoenix is being threatened by serious environmental problems.

Phoenix's rapid growth has taken the city by surprise, which Francis Loetterle, senior group vice president of strategic long range planning for Ramada Inns, blames on "almost an absence of planning to control growth." According to Mr. Loetterle, "The people whose job it is to plan growth have not taken into account the future needs of the city. I think the city has been slow to react."

The character of Phoenix's growth reflects the kind of lifestyle sought by those moving to the area, half of whom have lived in Phoenix for less than five years. Single family homes, ranches and mini-ranches up to an hour's drive away from Phoenix are preferred to multi-level apartments in the downtown area. As a result, the city's geography has taken on the characteristics of what many residents call "Los Angeles Sprawl." The lack of an adequate municipal transportation system in Phoenix forces most residents to rely on their automobiles, thus creating air quality problems.



Phoenix, Arizona

Craig Aumess/Woodfin Camp and Associates.

"Those of us who have been around for the last fifteen years have seen a considerable difference in the population level," says Ron Mathis of the Arizona Office of Economic Planning and Development. With the number of cars in the valley doubling every seven years, and with a geographic configuration that traps air in the valley basin, the impact of automobiles on air quality is a long-term problem.

Action *has* been taken in recent years to combat the city's deteriorating air quality. Many of the copper mines in the area have been shut down and the state's strict auto emission regulations are now being enforced rigorously. It is generally agreed, however, that the problem continues to worsen and that an alternative to increased automobile commuting must be developed soon. Several alternatives have been debated. One approach favors increased bus service and the expansion of arterial roadways into some kind of freeway system, while another favors a rapid transit system, either overhead or underground. Some city planners feel that a transit system would encourage future population growth near the transit routes closest to downtown, thus steering the city's growth away from the "Los Angeles Sprawl." Lawyer Gilbert T. Venible worries that to given Phoenix's rate of growth and the fact that it is so totally dependent on the automobile, "It is almost inevitable that our air will become like Los Angeles.'"

A Water Shortage

There is general agreement among city leaders and residents that while the diffuse development which took the city by surprise must be controlled and the city's resources better conserved and managed, Phoenix can still accommodate additional growth. There is one problem, however, that if not solved will at best hinder growth and at worst have devastating effects on Phoenix's existing population. Arizona relies on groundwater for over sixty percent of its water supply. Its population consumes 2.5 million acre-feet more groundwater than is replenished each year. If present and future water use is not managed carefully, Arizona eventually will run out of water.

The depletion of Arizona's water table is by no means a new problem. State officials knew a half century ago that something needed to be done to regulate groundwater pumping. But it wasn't until 1982, with passage of the Arizona Groundwater Management Act, that state legislators finally agreed on a method of regulation. Many long-time Phoenix residents believe that this long delay is typical of the city and state's "grow now, pay later" attitude.

Phoenix also faces another potentially serious water problem. Several wells have been found to have heavy concentrations of a chemical known as TCE, a possible cancer causing agent, and the wells have had to be shut down. It has been determined that hazardous wastes were dumped into the water supply years ago and have slowly submerged into the groundwater level. The most frightening aspect of the problem is that it is not known how widespread this contamination is, since it takes years for chemicals to seep down into the aquifer.

Phoenix's potential water shortage not only threatens its existing population, but it also raises questions about its ability to continue to attract new industry and therefore new jobs. Ron Mathis noted simply that Phoenix "will not be able to attract industries that demand large quantities of water."

Prospects for Future Growth

Concerned about air pollution and constrained by water quantity and quality, Phoenix is faced with difficult prospects for future growth. Many believe the area's desirable features have attracted more people than this desert area was prepared for. In an attempt to preserve the area's resources and manage the environment prudently, city planners are looking at industries that can either recycle water or use energy efficiently. These requirements naturally point toward high technology companies. Phoenix already has experienced success in this area, but many city leaders are concerned that because of Phoenix's changing environment and environmental problems, high technology companies may not continue to view Phoenix as a desirable place to locate. According to Bill Murphy, president of Murphy Engineering, air pollution has already started to have an impact on growth:

> I used to assist industries looking at Arizona as potential sites for building facilities. A lot of them are becoming concerned about the environment. Most of the ones that come here are high technology firms which come to Arizona because they can attract technical talent by saying they have Phoenix and Tucson locations. That conjures up visions of a very pristine environment, a good place to live, with a generally low cost of living. Professionals have been glad to work here for much less than they would in other parts of the country. The competition for people has continued, but the cost of technical talent has

gone up because Phoenix no longer has the advantages of a small town. The environment is not what it used to be.

Phoenix's second largest industry after high technology, and one with tremendous growth potential, is tourism. This industry too may suffer if environmental problems escalate and uncontrollable growth is not abated. Both the tourist and the high technology professional are drawn to Phoenix because of its attractive environment and quality of life. The fear is that other areas of the country will be able to offer many of the advantages Phoenix used to offer, and that as Phoenix grows the city may become less of a tourist attraction.

Many Phoenix planners are optimistic, however, that development and protection of the environment can take place simultaneously. According to Keith Turley, chairman and chief executive officer of the Arizona Public Service Company: "Particularly in the Phoenix area where economic development and growth is not dependent on the utilization of any of our natural resources, I don't see growth and the environment being mutually exclusive. We don't have the heavy industries to create air and water problems. Rather, we have space age technology without any kind of environmental impact. The only potential problem is the proper utilization of land—for people, homes and recreation, as well as industry facilities. And I don't think they are incompatible at all."

Roger Lyon, president of the Valley National Bank, agrees, saying that "we set out to attract clean air industry rather than heavy manufacturing and this has been a positive force in maintaining the environment, particularly our air quality."

Determining the "proper utilization of land," however, is an arduous task. Conflicting concerns such as agriculture and housing development must be balanced against proper land use and economic viability. Cecil Miller, president of the Arizona Farm Bureau Federation, feels that an unfair burden has been placed on the agricultural sector. According to Mr. Miller, "Farmers are selling their land for subdivisions at prices they can't make from farming. If farmers could receive a sufficient return for their product, they wouldn't be as anxious to sell their land. Someday we're going to regret taking some of the prime farmland in the world and covering it with concrete and asphalt."

While Governor Bruce Babbitt and state and city planners grapple with complex growth management issues, many Phoenix residents fear their quality of life is changing for the worse. For some though, the more developed urban environ-

ment has its positive aspects in the form of cultural activities, professional sports, health clubs, etc. The challenge, then, is to retain the more rural lifestyle, satisfy urban needs, and protect and preserve the environment.

According to Gilbert Venible, a Phoenix lawyer who has represented many environmental groups, a concern for the environment in Phoenix is generally lower than in many other cities such as Boulder and San Francisco. "The typical Phoenix person has come here from somewhere else and doesn't have that strong, permanent attachment that makes him want to make this a good place for everybody else. It is more of a rugged individualism out here, and if you want to preserve the environment you have to be willing to restrict yourself a little bit. You have to be willing to sacrifice some of the convenience of automobiles so as not to have air pollution."

Phoenix leaders nonetheless feel that in 1982 there is more concern for the environment than there was five years ago. As Phoenix continues to ask itself what kind of city it wants to become, this increasing environmental awareness may influence the city's growth policies. As businessman and energy expert Bill Murphy expresses it:

> Air pollution, traffic pollution, more competition for recreation sites—is the growth worth the price? That question is answered differently depending on how each of us is impacted individually. If we have gained enough from growth from an economic standpoint, then we can afford to resolve environmental problems by moving to a more exclusive neighborhood, by having a work environment where traffic problems have less impact on our travel—in essence, we can avoid some of the problems. But it's a question of how much we are also custodians for later generations. In other words, how do we feel about what's coming in the future as to how much of our resources should be utilized at this time?

Columbus, Ohio

The Middle West Region

- Residents are moderate in their growth orientation.
- Residents are balanced when forced with economic and environmental trade-offs.
- Residents are evenly split on whether controlling pollution should be a high priority.

Issue:
Columbus, often described as *the* typical American city, by diversifying its industrial base has avoided some of the more severe economic problems faced by its midwestern neighbors. Its critical environmental issue, acid, rain claimed to be caused by sulfur emissions from Columbus, coal-fired utilities, does not actually affect Columbus directly, but is a source of constant complaints by Vermont and Canadian residents.

Stability

Columbus, Ohio has changed very little since 1959 when a national magazine described its residents as "typical, a representative cross-section of the American population." Columbus remains in 1982 a city with diversified business and industry, close to average income levels, and, as many people interviewed noted, a "good place to raise children."

Columbus' stability is particularly striking when viewed alongside the economic ravages and urban disintegration of its neighbors, Detroit, Cleveland, and Youngstown. Unlike these cities, Columbus has achieved and maintained a well-balanced proportion of manufacturing to other major employment sectors: manufacturing 18%; government 20%; services 21%; trade 24% and other 17%. As a result, the Columbus economy is less vulnerable to national recessions and less susceptible to regional shifts of resources. Also, since manufacturing in Columbus has tended to be primarily light industry, such as electronics, the city has avoided many of the serious and costly environmental problems faced by other major mid-western cities.

Columbus, Ohio

George Hall/Woodfin Camp and Associates.

Acid Rain

Ironically, the most important environmental issue in Columbus has serious effects outside of the city's borders. It is claimed sulfur dioxide emissions from Columbus coal-fired utilities precipitate out into what is commonly called acid rain which, while it does not fall directly on Columbus, is a serious concern to communities hundreds of miles away.

Although there are differences of opinion, a panel of atmospheric chemists and meteorologists has presented evidence suggesting that the industrial midwest may be a major source of the acid rain responsible for sterilizing some New England and Canadian lakes and streams and damaging forests. This is a complex and controversial issue, and other scientists have identified a variety of acidifying influences other than precipitation which contribute to pH levels.

In any case, certain areas of the country are more likely to suffer as a result of acidification. According to Steve Sedam, executive director of the Ohio Environmental Council, "The geology of central Ohio is such that we aren't noticing any direct effects from acid rain even though we undoubtedly are receiving acid precipitation. Right now acid rain is not manifested in our water quality because our soils and bedrock have enough calcium and other minerals to buffer the acid, whereas in New England the soils are different."

American Electric Power Service Corporation, headquartered in Columbus, burns more coal than any single utility in the United States—between 42 and 43 million tons in each of the last three years. Yet residents of Columbus are far less aware and concerned about the problem of acid rain (to which the burning of coal may or may not be a contributing factor) than the residents of Vermont and Canada. There is a disagreement among experts as to how much consumers would have to pay in increased utility bills if sulfur dioxide emissions were reduced by "coal-washing" and other pollution control technology. As pointed out by William Gerstner, chairman of the Utility Air Regulatory Group, environmental controls must be carefully evaluated to weigh benefits and costs.

In addition, if future research confirms the suggestions by some scientists that Columbus is contributing to acid rain, the issue may raise interesting questions which few cities confront. It is unclear how our society should cope with the problem of an industry in one area of the country impacting negatively on regions hundreds of miles away. Although Columbus' 8% unemployment rate is far less

than that of other midwestern areas, the broader region served by American Electric Power is among those hit hardest by the current recession. In this context, the prospect of increased utility rates would certainly be a hardship. On the other hand, the northeastern United States may currently be suffering economic loss and environmental damage because of acid rain. The acid rain issue is an extreme example of how forces beyond the city's control have, for the first time in years, begun to impinge on Columbus' expectations for continued economic development and growth. The city's traditional stability may become increasingly difficult to maintain. Furthermore, a rise in unemployment is serving to warn city leaders of a critical problem: no matter how stable the population, central Ohio is to a considerable extent tied to the economic woes of its industrial neighbors. Many of the white-collar jobs in Columbus—in government, higher education and insurance, for example—are directly affected by the health of industries in other cities. City planners therefore, feel that this dependence must be broken or substantially lessened if Columbus is to remain stable and prosperous.

Attracting High-Technology Industries

Many Columbus business leaders and planners believe that one way Columbus can achieve independence is by making the city even more of a center for "high-tech" business and industry. Columbus is already internationally known as an information and research center. Ohio State University and Battelle Memorial Institute, which employs approximately 2,500 people, can play a major role in any program to attract electronics and other computer-related business.

According to Dr. Sherwood Fawcett, president of Battelle, "In the last decade Columbus began to realize it had high technology resources. Now there is on the part of the business leadership a much more conscious attempt to try and capitalize and build on it."

According to Ernest Hartung, vice president of economic development at the Greater Columbus Chamber of Commerce, Columbus certainly has the room to accommodate new high technology companies. He points out that more than 4,000 acres of serviced land are available in the city's industrial parts. More importantly, the city appears to have the ingredients necessary to foster a technology-oriented environment. "Columbus offers a stable, highly educated work force, a good relationship between business and universities, low cost of living, an excellent transportation network, and good quality of life amenities," Mr. Hartung said.

"These attributes are highly attractive to the kind of industry we feel would be beneficial to the city's growth."

Growth

The city's attitude towards growth, physical as well as economic, has historically been aggressive. For example, through an effective annexation program the city increased in size from 39.4 square miles in 1950 to over 183.1 in 1981. Geographically it is the largest city in the state of Ohio. While population growth between 1970 and 1980 was over three times that of Ohio as a whole, the mix has remained relatively the same—predominantly white-collar and middle-class.

For the first time city planners are changing their approach to growth. Ralph Smithers, director of the city's Department of Economic Development, explains that "We are trying to direct city decision-makers to address not expansion, but the improvement of existing infrastructure. What we're preaching now is that, yes, we are going to grow, but maybe in a different way. We won't grow as fast as we did in the past. We were smart enough to know when to grow. We ought to be smart enough to know when to slow down."

The city's rapid growth does not seem to have altered its basic character. A local radio station teamed with some Ohio State University market research experts in 1981 to find out how Central Ohioans feel about the quality of life in their home town and the results were very positive. The Columbus area is perceived as safer, cleaner, and healthier than other cities. People generally like their homes, schools, parks and neighborhoods.

John H. McConnell, chairman of the board and chief operating executive at Worthington Industries, a $428 million homegrown firm which processes close tolerance steel, described the growth he has witnessed: "Columbus is a diamond in the rough. I've watched it grow over the past 28 years from pretty much of an overgrown country town to a growing metropolitan city. This growth has definitely improved the quality of life here." In one very important sense, therefore, Columbus' growth has not been at the expense of the environment. The recent influx of people and business has increased dramatically the number of available cultural offerings.

Environment

Although Ohio residents are not generally described as environmentally active, two recent incidents in Columbus illustrate a growing concern for the city's use of water and land. The Olentangy River has been classified by the state as one of eight scenic rivers in Ohio. Ohio was the first state to implement a program to recognize scenic or wild rivers. But according to George Richards, Jr., a native Columbus resident and committed environmentalist: "The Scenic River Bill has no bite in it in so far as saying that this land will be set aside and be protected."

Vice president of the Capital Wholesale Drug Company, Mr. Richards fought several battles to defend the Olentangy River against commercial development on its banks. He won some of these contests by convincing county commissioners that the river must be protected as set forth in the state's own Scenic River Bill.

When a 16 acre section of rural river property in downtown Columbus was proposed for a bank site, Mr. Richards accepted a compromise. He suggested that a corridor immediately adjacent to the water be set aside and that the bank be built closer to the road. The bank accepted the arrangement and, in a surprise move, donated the corridor property to the City of Columbus Parks Departments.

"It was a fascinating example of how you can be effective working within the system and, if you have a sound environmental case, be listened to," said Mr. Richards. "Ohio is very conservative politically and people don't like the idea of having private property set aside for public ownership as has been done in the west. The people of Ohio believe the federal government should stay out of the lives of individuals. On the other hand, if you sit down and talk to them and say, 'Do you want clean air and water? Do you want to risk the possibility of suffering from cancer or some other problem 20 years from now because you're breathing bad air, and polluting your good water?' There's no question the person will say, 'Yes, let's have a good environment.' The American people want a clean, protected environment," Mr. Richards added. "I'm a businessman. I'm in favor of reasonable growth, a balanced federal budget and government getting out of many programs. But not at the expense of the environment."

Columbus faces a dual challenge of preserving its valued quality of life and shifting its economy away from manufacturing, government and service businesses to research, information processing and technological industries. Within the next

few years, Columbus may serve as an example of how a representative American city plans to control its growth. As Battelle's Dr. Sherwood Fawcett describes it:

> To meet this challenge, Columbus will have to devote more effort to planning than it has in the past. In a sense, Columbus' success to date is probably as much a matter of good fortune as it is good planning. It may not be as exciting as some places. But it's a nice place to live. While other cities in the midwest have fallen apart, Columbus has remained stable.

Seattle, Washington

The Pacific Region

- Residents are least likely to believe their community ought to grow by attracting more industry and housing.
- Residents are most likely to place a high priority on controlling pollution.
- Residents are more likely to feel that pollution is not affecting their lives.

Issue:
A strong tradition of environmental preservation undergoing a reevaluation in the course of establishing new directions for the city's economy.

Striving for Growth

While other cities continue to deteriorate, Seattle has for the most part emerged as a model of a progressive and vital urban center. Increasingly, however, there is a sense that the economic stress the state and the nation have been experiencing is rubbing off on Seattle and that something must be done to strengthen the city's economy. A recent report issued by the state's Office of Financial Management revealed that for the first time in almost a decade more people are moving out of Washington state than are moving in. The report attributes this to the state's unusually poor economy and high jobless rate.

While most city leaders strongly support a rigorous economic development program, they assert that such an effort must be conducted taking into account the area's firm commitment to protecting the environment. Concern for the environment is a long-standing tradition in Seattle. The city has more paid staff working on environmental issues than any city except San Francisco and Washington, D.C. Environmental sensitivity is a non-partisan matter, and community interest groups tend to agree on many environmental issues.

This environmental commitment has resulted in a widespread perception of Seattle as an anti-growth city. But most citizens, including many environmental leaders,

Seattle, Washington

Timothy Eagan/Woodfin Camp and Associates.

are confident that economic development can be achieved without destroying the city's environment. Ben Shuey, President of the Washington Environmental Council, said: "I think that the apparent dichotomy between the economy and the environment is a false dichotomy. Here in Seattle we are not concerned about growth per se, we are concerned about uncontrolled growth."

Overcoming the No-Growth Stereotype

In order to overcome its no-growth reputation, Seattle has launched an aggressive program of economic development which, city planners hope, will expand and diversify the economy while promoting responsible, environmentally conscious growth. In addition to changing perceptions of Seattle among outsiders, community leaders believe that their effort is having a positive impact on residents. Leland F. Smith, executive director of the Economic Development Council of Puget Sound, explains, "There seems to be more of a public knowledge of and interest in the economic growth process here than in many other communities. There is a below-the-surface awareness that the economic development process cannot be stopped. We have to maintain it in order to ensure a healthy environment."

Edward McMillan, senior vice president and chief economist of Rainier National Bank, expresses a widely-shared concern: "We're not just interested in growth for growth's sake. We want the kind of growth that is beneficial to the area in terms of the whole environment – the natural environment, the tax environment, the community environment. We're not looking for just any type of industry to come here."

Sometimes this cautious attitude requires that growth and job opportunities be rejected outright. Just this year, Governor John Spellman received the Washington Environmental Council's State Elected Official of the Year award for his continued commitment to protect the area's treasured Puget Sound from heavy industry projects even though these projects would have created jobs which are sorely needed by the city's unemployed.

New Directions for the Seattle Economy

According to Leland F. Smith, executive director of the Economic Development Council of Puget Sound, the Seattle economy is undergoing a major transition. Ten years ago, a large segment of Seattle's economy was directly dependent on

manufacturing transportation equipment for markets outside the area. Seattle has long been closely identified with Boeing, for example. The economy was characterized by heavily unionized, capital and energy intensive industry. Shipping has also been an important component in the economy.

In the past, Seattle has had a competitive edge on electrical power rates, mainly due to abundant hydropower. New dams have not been built, however, so the city cannot expect to meet the demands of high energy users unless they move toward much more expensive nuclear power or oil. In fact, Seattle is no longer even talking to energy intensive companies. Instead, the city is pursuing electronic and other high-technology businesses.

Seattle businessmen and political leaders believe that their community will be attractive to the kind of companies they seek. "The electronics industry is looking for areas where engineers and scientists are located, or a place where the quality of life exists which will attract these people," said Mr. Smith. "I would say without exception that every company we talk to takes into consideration our ability to draw top talent from the national markets in terms of the lifestyle that we offer. In attracting corporations, this is the number one consideration. We're in the middle of a battle between having the ability to attract these people because of the quality of life that's offered here, versus losing that advantage simply because of the growth we may experience if these companies selected Seattle," Mr. Smith added.

With the decline in the transportation industry, brought on in large part by the difficult national economic situation, Seattle almost has no choice. It must take steps to revitalize its economy.

Dean Mosier, director of the Department of Community Development, is concerned that even high-technology industries will create problems, such as undesirable growth in Seattle's suburbs. Although there is still capacity in the suburbs, an influx of high-tech industries could in a short time overwhelm the existing infrastructure and create a landscape of in-fill development similar to that found in such areas as Los Angeles. "The suburban areas are attractive to these industries. Presently Seattle-King County has no controls to prevent cheap rural land from being developed," said Mr. Mosier. "Unless we have guidelines, our outlying areas are destined to become like Silicon Valley, developed by high-tech industries with new sub-divisions. This will place a further strain on the city's and county's resources. We have mutual growth management policies in lieu of guidelines."

Mr. Mosier advocates trying to induce these industries to locate their facilities in the urbanized areas of the city. In addition to trying to avoid uncontrolled urban sprawl, Mr. Mosier is responsive to another significant problem – resident resistance in the more affluent suburban areas to allowing companies to locate in their neighborhoods.

Hewlett-Packard Company, for instance, has been facing serious difficulties in its effort to open a plant in a 100-acre semi-rural site. Although a change in the city's master plan and zoning required for this plant was approved by the city and received public support, state environmental laws have enabled some local residents to file a lawsuit holding up development.

Local resistance to plant siting in Seattle is not universal. In another situation, in Pierce County, the need to create jobs was paramount. Fairchild Camera & Instrument Corporation is locating a new manufacturing plant in an area that is partly residential and partly commercial. The residents, a blue-collar population compared with the professional, higher-income residents near Hewlett-Packard, accepted the plant because it offered jobs. Although there were residents who opposed the Fairchild project on environmental terms, those who supported it for economic reasons carried the vote.

City officials agree that growth management will and must result in some moderate changes in the state's environmental laws. But these changes may prove difficult to achieve. "There is such overwhelming support here for the environment that any changes that might be perceived as leading to environmental degradation will not receive public support," Leland Smith said.

Dean Mosier, while sympathetic to the need for economic development and jobs, concluded by calling for balance. He cautioned: "The consolidated impacts of air contaminants, acid rain, waste water disposal, energy demands, transportation needs…we still have a lot of capacity to absorb that. But 25-30 years is no time at all. The environmental situation may be all right for the duration of our careers, but when we are enjoying our retirement, resting on our laurels, what the hell will we have left?"

Montpelier, Vermont

The New England Region

- Residents are preservationist in growth outlook.
- Residents place a priority on "controlling growth."
- Residents choose environmental over economic options in trade-off questions.

Issue:
Seeking to balance a deep-rooted commitment to preserving the natural beauty of the land and a pressing need to build the largest powerline in the nation to provide needed energy.

Achieving Balanced Growth

Vermont is a state with strong preservationist attitudes. While trade-offs balancing environmental and economic concerns are carefully weighed, a particularly high priority is placed on environmental protection. Working within this framework, the state recognizes that it must accept growth in certain areas. Currently, for example, officials are grappling with the problem of how to ensure adequate energy to meet residential needs and permit future development.

Citizen activism is key to understanding Vermont's policy making process. Characteristic of the resource preservation perspective, residents are intensely involved in the decision making process. (See Table 4.6.)

An examination of how Vermont is facing the problem of increased energy needs sheds light on the kind of trade-offs considered acceptable, and how trade-offs are debated in those regions of the country where preservationist sentiment guides growth decisions.

Exploring Energy Options: The Powerline Issue

In order to meet its energy needs, Vermont is debating whether to build a 52-mile, 2,000-megawatt powerline. The powerline, which would be the largest in the nation,

Northeast Kingdom, Vermont

Pat Giniger Snyder

would connect the hydro-Quebec power grid with the New England power grid, providing the six-state New England region with 13 percent of its peak power needs.

The powerline issue has generated considerable controversy among state residents. In the time honored town-meeting tradition, hundreds of Vermonters have voiced their concerns. "People have had more than one chance to have their say," explains John Mitchell, editor of the *Times-Argus* in Barre, Vermont.

The issue of energy availability is essential to Vermont's prognosis for growth in a state where residents pay high prices for oil and gasoline. The decision on the powerline has become more pressing with the projected loss of 150 megawatts presently obtained from the Power Authority of New York State, now a principal supplier of inexpensive hydro-power.

Governor Richard Snelling succinctly summarized the reasoning behind the state's support for the powerline:

> We know for sure that if we don't have electricity around here, it's going to be pretty hard for the folks to survive on the farms, and that if we don't have adequate electricity that we're not going to be able to provide jobs in competition with Boston, or Route 128.

Hydro-Quebec, Canada's largest corporation, is pursuing an aggressive marketing strategy to sell its surplus power. Without guaranteed U.S. customers, the remaining phases of the James Bay hydroelectric power project cannot be completed.

Political leaders in Montpelier, Vermont's capital, realize that a final decision on the proposed powerline must take into account the state's burgeoning energy requirements, political pressure from Canada, and the preservationist sentiment on the part of many Vermonters.

Critics of the search for additional energy sources claim conservation efforts and wood-burning stoves can make up the 150-megawatt loss from New York State. It will not be necessary to buy Canadian hydropower in order to meet projected power needs, they say. At the heart of the dispute is the question of how much growth and what kinds of trade-offs Vermonters will support.

There is a feeling that the quality of life in Vermont is unique, and that it must be protected. People may be willing to pay more for this, and accept what others might consider a lower standard of living. As Mr. Mitchell, who has lived for almost three decades in Vermont, reflected, "I think a significant number of people in Vermont would pay the price to live in Vermont." The question is, how much are they willing to give up?

Trade-offs: Costs and Benefits

It is clear that the powerline would lower energy costs for Vermonters. While there is disagreement over the actual need for additional energy, the economic payoff can be computed based on the contract currently being negotiated. Vermont as a host state would get a 10% savings. For each resident that would mean approximately $20 a year for the first year and $56 a year by 1997. More than $1 billion will be saved by the entire New England Power Pool over the period of 1986 to 1997. The proposed savings, however, are not enough to stimulate unanimous support for the line.

The New England region, as the data in Chapter 5 show (Table 5.6), is one of the regions most likely to favor environmental protection over increased energy production. The corridor for the powerline runs through some of Vermont's most pristine wilderness. The 200-foot path would affect 1,262 acres. Opponents fear the line will threaten both deer hunting and fishing, which are essential to Vermont's $165 million-a-year sporting industry. In addition, residents have raised questions about the health impact of the ion discharge from the high-tension wires, as well as from the herbicide used to clear the underbrush for the transmission towers. Debbie Knudson, a resident of East Concord, through which the line would pass, stated, "They say you can crawl under it and light up a bulb, and if there are so many charged particles in the air it's not safe, I don't think."

As in many complex community decisions, it is difficult to precisely define and weigh the costs and benefits. However, this is clearly the approach that Vermonters, pro and con, are taking. George Hamilton, executive director of the Vermont Public Interest Research Group, emphatically stated: "If you could quantify the environmental impact and the health and safety risks and put them into a cost-benefit analysis, it wouldn't come close—the project would fail."

Legislating Responsible Growth

A great deal of reflection on growth is evident in Vermont. Policy decisions are made after carefully balancing economic and environmental priorities. In each case, trade-offs have been decided so as to pursue growth in a balanced and restrained fashion. Discussions on the powerline reveal a moderate growth outlook, which is typical of a range of related issues. For example, Vermont has passed land development legislation, the innovative Act 250, which has established a unique character to the state's growth.

Similar to Vermonters' position on energy, attitudes on land use tend to favor the environmental position of leaving large sections of land "untouched" (Table 5.10). Vermont is one of the few states which has a strict land use law. Business support for land use regulations is illustrated by James Griffin, president and chief executive officer of Central Vermont Public Service:

> Probably one of the wisest things that was ever done here in Vermont was the passage of Act 250, which requires local and state approval before you can do just about anything—from burning rubbish right on up to building a new factory. The Act itself is having a controlling factor in that we're not running wild with a lot of hodgepodge... type of development.

However, some trade-offs have been made as a result of Act 250, and not all Vermont residents are enthusiastic about the strict land use policy endorsed by the state. Roger Heclier, postal worker and former dairy farmer, thinks that:

> Act 250 stinks...they're trying to discourage housing...Vermont's gotten to the point where it's not the native Vermont people but people from other states that want to keep Vermont the way it is, the way they think it is and should be...and they try to shove it down your throat at the zoning meeting.

Public debates seem to become particularly vociferous when strict land use regulations prevent subdivision housing and shopping mall development. As Mr. and Mrs. Heclier point out, young people need jobs and housing. They can afford the smaller ½-acre housing plots, but not the larger ones preferred under Act 250. Similarly, shopping mall development brings hundreds of jobs and helps young

people remain in the state. From the Hecliers' viewpoint, Act 250 "pressures young people into getting out of the state."

Landscapes and natural setting have been protected by Act 250, but there have been economic consequences as a result. Critics of Act 250 have been vocal in enumerating the Act's detrimental effects. However, the general consensus among residents, businessmen and government officials is that the restrictions imposed by the legislation have been a positive development.

Decision-Making at the Grass Roots Level

An essential point in understanding Vermont is that it is a small state where an ethic of participation is predominant. From minor, insignificant matters to ones of great importance, there is respect for shared decision-making. This input even influences decisions that affect the environment only slightly. The owner of the Mountain View Inn in Waitesfield, Vermont, considered cutting down an old tree which blocked the sun from her dining area. "We couldn't cut it down because it is right on the street and the neighbors would oppose it [cutting it down.]" People's opinions count on small problems as well as large ones.

In Vermont, more than in other states, a significant effort is made to air public opinion on an issue. Communication with the public certainly has been important in debates concerning the powerline. "Let's get the information out, let's not rush this thing through, let's not push it down the people's throats," remarked Terry Baker, editor of the *Littleton Courier* and a resident of the "Northeast Kingdom" region of Vermont through which the powerline will run.

For the business community, citizen participation is a fact of life, and communication is vital to business success. Public reaction to the powerline is illustrative of the extent to which Vermonters become involved in key issues in their communities and how public attitudes are considered in trade-off choices. Mr. Griffin, the head of one of the largest power companies in Vermont, stated:

> Vermont has really opened its doors to the collective process... [we must] try and tell as many people what the [powerline] situation is, because they are the ones that are going to make the decisions about a lot of things here. Knowing the people here in Vermont, it would be suicide not to do this.

The state has responded to citizen objection to the original powerline location. The line was first designed to run through several small northern towns. Residents influenced state officials to shift the proposed line path through very remote, mostly uninhabited areas. In addition, to meet the aesthetic complaints of opponents, the design of the transmission towers was changed to include wooden rather than lattice-work metal poles. According to Richard Saudek, Commissioner of Public Service:

> We met a tremendous amount with the population in the various places...we went to the townships through which the line was to go, we talked at town meetings and had special sessions, and we've tried to cover all the concerns... I have told the people working on this that if we find a serious problem we should face it directly and if it kills the project then we should kill the project.

In energy and land use, and in other key areas which determine the pace of growth and affect the environment, it is clear that all options are fully weighed and carefully balanced. Because of residents' extensive participation, there is considerable consensus supporting the moderated growth policy which emerges.

Attitudes toward Responsible Growth

Vermont is unique in the extent to which residents share a common concern for the environment and a desire to participate in decision-making. Environmental sentiment varies only in degree. "Some environmentalists may want to leave Vermont just the way it was in the 1600's," says Robert S. Gillette, chairman of the board of the National Life Insurance Company in Montpelier. "The businessman does have to cut some timber, build a shopping center or a plant, but people don't stay in Vermont unless they're interested in the environment." Mr. Gillette attributed the high quality of his work force to its sensitivity to protecting and enjoying nature. When asked about the future direction of growth in Vermont, Mr. Gillette said that he expects that as the younger generation moves into business, professional, and government positions, an even higher priority will be placed on protecting the environment.

Chapter Seven

Implications for Future Policy: A Summary of Comments by Advisory Panel Members

When this study was first conceived, one of the advisory panel members, Thomas Nicholson, director of the American Museum of Natural History, described it as an effort to throw light into dark corners without directing the beam. The purpose was to discover what was going on in the minds of the American public in regard to economic development and environmental conservation and to compare these attitudes with those held by businessmen and environmentalists. It was clear that the tensions between these two major goals would have a major impact on the future of the nation.

The research, instead of highlighting imperatives endorsed by protagonists in a great debate, uncovered something quite different. We found that what is taking place in our society is not a battle between businessmen and the public (although in specific conflicts they do find themselves on opposite sides of an issue), but between two elemental strains in our culture which are affecting us all. A utilization ethic is deeply embedded in the minds of Americans, and has been so since the earliest days of the nation. A conservationist ethic which is a relatively new factor in American life has become equally pervasive in our present-day outlook. And although there are some who are far more dedicated to one or the other, even those who are at the extreme ends of the growth continuum subscribe in some measure to the basic tenets of the other.

The study data reveal different individuals and groups embrace disparate sets of assumptions. But these distinct groups do not fit the labels which have been given to them in the past. A substantial number of businessmen evince a strong preservationist tendency. The most environmentally aware among the public generally support the free-enterprise economic system. The characteristics of the committed preservers and the committed utilizers, as described in the report, explain the conceptual context which determines these two points of view. We find the two are not at all incompatible.

The ideal of achieving responsible growth, which strives to fulfill both social needs and human ideals, is supported by virtually all segments of the population, regardless of their views on the growth continuum. Advocates of either no-growth or limitless growth are so few in number as to be inconsequential in the quest for responsible trade-off decisions.

Panel member Ruth Hinerfeld, past president of the League of Women Voters, states: "The report should be welcome news to both environmentalists and the

business community. To the environmentalists, it offers further proof of their potency as a popular movement in shifting the continuum of public opinion in the direction of an environmental ethic. To business, it offers further reassurance of wide-ranging public support for the traditional tenets of free enterprise." Ms. Hinerfeld adds that *The Continental Group Report* documents an increased sensitivity and flexibility toward the environment among business leaders, a widespread recognition among environmentalists of the need for economic growth, and the preference of the general public for a balance between the two. She warns, however, that this flexibility will not have positive societal implications "unless business leaders and environmentalists move beyond the battleground of public policy to stake out their own meeting ground of direct dialogue and cooperation."

On the question of serious trade-off choices, advisory panel member Riley E. Dunlap, associate professor of sociology at Washington State University, points out that a cynical ecologist might argue that Americans want to have their cake and eat it too—i.e., protect their environment but *not* at the cost of any significant change in lifestyle. He suggests, however, that the public does desire a *reasonable balance* between environmental protection and economic growth and that this is good news for those who seek to promote responsible growth. The public is learning to weigh trade-off decisions.

Advisory panelist Harlan Cleveland, director of the Hubert H. Humphrey Institute of Public Affairs in Minneapolis, believes that the study confirms what many observers had long suspected, that with the enormous flow of information available to the people at large, they have already, in an inchoate way, established a framework essential to resolving future economic-environmental dilemmas. He feels that *The Continental Group Report* has taken a snapshot of the early stages of policy formation. According to Dr. Cleveland, the public is changing its perception of growth, moving away from the established concept that the nation's progress is measured by increases in the Gross National Product, moving toward a doctrine he describes as "the enhancement of the human environment" Dr. Cleveland predicts that in response to public sentiment, experts will now codify this policy shift and, based on this outlook, begin to detail new programs. Eventually, national leaders with a flair for publicity will step forth to announce new directions and be credited by the media as "policymakers."

The new consensus on responsible growth which Harlan Cleveland refers to has developed in less than a generation, according to advisory panelist William D. Blair, Jr., president of Nature Conservancy. He is encouraged by the persuasive

evidence provided by the study that "the perspectives of the American public on economic growth and environmental health are, overall, informed, reasonable and balanced." He is concerned, however, that the public may not be aware of the time pressure under which we are operating as a society, "the geometrically accelerating pace at which population, technology and per capita consumption are expending the natural capital (soil, water, gene pools, etc.) on which future progress and basic welfare must depend." Riley Dunlap expands on this point by referring to those ecologists (such as Lester Brown, Barry Commoner and Paul Erlich) who believe that our current lifestyles, based on heavy use of non-renewable energy and other resources, are not "sustainable," and that profound changes are necessary if irreversible harm to the global ecosystem (e.g. climatic change due to increasing levels of carbon dioxide produced by fossil fuels) is to be prevented. Recognizing this as a danger, Dr. Dunlap concludes that "our future will be the result of a complex interplay among human aspirations and ingenuity and ecological conditions, and if we stake our future solely on the former while ignoring the latter, we may be in for some major disappointments."

For this reason, advisory panelist Gerald Piel, publisher of *Scientific American*, who also found the large areas of consensus identified in *The Continental Group Report* encouraging, feels that activist environmental organizations have played a key role in bringing about a basic shift in outlook on the part of the American public. He points out that while "there is no fated conflict between economic growth and environmental concern...we owe this consensus to the working of the adversary process. Over the past 20 years," he explains, "citizens imbued with environmental concern have asserted that concern as the third party in every economic transaction, even to the extreme of opposing economic growth. The political resolution of the controversy put pioneering environmental legislation on the books."

Facing Trade-off Decisions

It is perhaps at the grass-roots level that the most intense economic-environmental debates will occur over the next decade. While policy decisions can in many instances address both economic needs and environmental protection, there are times when these two imperatives simply cannot be achieved simultaneously.

"There are some contexts in which trade-offs are inescapable and still others in which true either-or choices must be faced," remarks advisory panelist Michael I. Sovern, president of Columbia University. President Sovern believes that while the public supports both the economy and the environment, they cannot always have both.

In local community debates resource limits often make choices *between* economic and environmental imperatives a necessity. In these circumstances attitudes and behavior follow "naked self-interest...." President Sovern points out that in a community crisis, it is the neighbors of a polluting plant who adopt a preservationist viewpoint and vote to clean it up or shut it down, while those who are unemployed advocate saving jobs. This will continue to be a factor in local disputes even though, as the data in this report show, those who are economically pressed *do not* discard their environmental sensitivity.

Individual judgments as to what constitutes responsible growth will, of course, vary depending on one's premises and where one stands on the growth continuum. What does emerge from the study data is that there is no monolithic business "position" which needs to be "attacked" by activist environmentalists if "progress" is to be achieved. It is true, as Gerald Piel notes, that executives of large companies do not give as high a priority to environmental consideration as executives of smaller companies and the general public. "Because it is the decisions of the big business group," he states "which portend the largest near- and long-term consequences for the environment, the advisory process must continue to strengthen the consensus." But this process should not be based on unsupported accusations against the business community as a whole. As advisory panelist Seymour Martin Lipset, professor of political science, professor of sociology, and senior fellow at the Hoover Institution, Stanford University, points out, it is natural for people to be "suspicious of powerful institutions, of big business and labor. They feel that power will be used in their self-interest and that the public may suffer. This adds to the tension with which differing viewpoints are debated in the public arena." Advisory panelist Jay Iselin, president of the public television station WNET, suggests that the tension can be reduced if a concentrated effort is made to communicate the sympathetic viewpoints of a substantial segment of the

business community toward environmental concerns, which is well documented by *The Continental Group Report*. "At this time in our country's history," Iselin states, "the business community should be urged to demonstrate its concern for the environment and its commitment to responsible growth. It is high time to dispel the image of the businessman as the selfish villain in the plot to irrevocably change the environment." This is particularly relevant, Harlan Cleveland points out, at a time in our history when most of the industry in our society is in the field of services rather than production and distribution, and two-thirds of the service component is devoted to what he calls "the information society." This makes the old dichotomy of business against the environment obsolete.

One of the risks in developing a new model to explain public attitudes in terms of a preservation-utilization continuum is that it will impose yet another polarity on our perception of growth. As advisory panelist Zachary Morfogen, director of cultural affairs of Time, Incorporated, warns, it would be unfortunate if editorial coverage and public discussion of *The Continental Group Report* leads to a sort of "black-hat, white-hat, them-against-us oversimplification." Harlan Cleveland also stresses the importance of avoiding a "two-sided interpretation" of the report.

As Michael I. Sovern points out, rather than examining differences, we should explore areas of agreement so that policymaking on the national level at least can proceed without radical shifts in either direction. This is especially important, he states, because so much waste is involved in an on-again-off-again environmental policy. A more responsible approach, according to Mr. Sovern, should strive to help "avoid the heavy costs that unpredictable or oscillating standards inevitably entail," as well as save the environment "from alternating periods of permissiveness and rigorous enforcement of environmental standards." He expresses the hope, which other members of the advisory panel echo in their comments, that the study will "help persuade our political leaders that their self-interest as well as the national interest dictates a stable course."

Methodology

A multi-stage research design was used in conducting this study of American attitudes toward growth. The first phase consisted of qualitative and background research undertaken to generate hypotheses and develop topic areas for the second phase. In the second phase, surveys were conducted among four populations: the general public, business executives of small corporations, business executives from the FORTUNE 300 industrial corporations, and members of environmental advocacy groups. The third phase was devoted to data analysis.

Phase I: Qualitative and Background Research

Phase I consisted of a review of past and current research on environmental attitudes and the methodology of exploring trade-off decisions. A particular emphasis was placed on examining prevalidated measures of environmental support.

Advisory Panel

To provide input and guidance to the study, a panel was formed of nationally known experts in various fields. This group was consulted during all phases of the study. The advisory panel was particularly helpful in the questionnaire construction phase, in the phrasing of sensitive attitude questions and in designing bias-free trade-off alternatives.

The completed report reflects contributions from all advisors. Their comments on the study implications can be found in Chapter Seven, the Report Conclusion. A list of the members of the advisory panel can be found at the front of the report.

Phase II: Quantitative Surveys

Data Collection—General Public

Fifty trained interviewers conducted phone interviews for a period of eight weeks: February 16 to April 13. The interviews were conducted on weekdays and on weekends, between the hours of 10:00 AM and 11:00 PM. The interviews took an average of 40 minutes to complete.

Briefings were held before each daily interviewing session to discuss the data collection process. Interviewers were urged to ask questions at any time throughout the interviewing period. Supervisors audited each interviewer periodically in order to ensure accuracy and nonbias.

In order to ensure that the respondents interviewed represent a random sample of the total U.S. population, at least four call-backs were made to each telephone number that had not yielded a complete interview. A final response rate of 57% was obtained. The components of the response rate are listed below.

General Public Response Rates

Completed interviews	1310 (57%)
Non-response	998 (43%)
Refusals	612
Terminated interviews	47
Call backs	339
Total potential respondents	2308
Excluded from sample	2185
Disconnected	907
Never answered	521
Always busy	68
Business/government	405
Deaf/language problem	146
Not qualified	138
Total number of calls	5803

Data Collection—Business and Environmental Samples

A shortened version of the general public questionnaire was administered to executives of small and large corporations and to members of the four environmental groups.

Top Executives, Small Corporations:
Small corporations included corporations with sales of $15 million to $50 million as defined by The Heller Institute on Small Business. A random, national sample was drawn from a list provided by Alvin B. Zeller, Inc. Only chief executive officers were interviewed; no substitutions were allowed. The interviewing took place on weekdays, from May 10th through May 21st, 1982, between 10 AM and 5:30 PM. Each interview lasted approximately 25 minutes.

Top Executives, Large Corporations:
A sample of executives from the top 263 corporations on the FORTUNE 300 industrial list were interviewed. Interviews were conducted with one of the top five executives in the company. The interviewing took place on weekdays during the period of May 25 - June 23rd, 1982, between 10 AM and 5:30 PM. Each interview lasted approximately 25 minutes.

Members of Environmental Advocacy Groups:
Interviews were conducted with members of four different environmental groups: Wilderness Society, Natural Resources Defense Council, Environmental Action, Nature Conservancy. Each of these groups represents a unique aspect of the environmental movement. The membership list was obtained from each organization, and a random sample was drawn from each. The four groups were combined, each receiving an equal weight. A representative sample of a range of groups in the environmental movement was thus drawn. Interviews took place on weekdays during the period of May 29th to June 20, 1982, between 10 AM and 11:30 PM. Each interview lasted approximately 25 minutes. Response rates for each sample are listed below:

Leadership Sample Response Rates

	Business Groups	
	Top Executives/ Small Corporations	Top Executives/ Large Corporations
Completed interviews	177 (40%)	86 (33%)
Non-response	264 (60%)	177 (67%)
Refusals	107	87
Terminated interviews	11	3
Call backs	146	87
Total potential respondents	441	263
Excluded from sample	192	–
Disconnected	20	–
Never answered	5	–
Always busy	7	–
Business/government	–	–
Deaf/ language problem	–	–
Not qualified	160	–
Total number of calls	633	263

Leadership Sample Response Rates *(continued)*

	Natural Resources Defense Council	Environmental Groups: Environmental Action	Environmental Groups: Nature Conservancy	Environmental Groups: Wilderness Society
Completed interviews	102 (74%)	84 (71%)	92 (68%)	83 (62%)
Non-response	36 (26%)	35 (29%)	43 (32%)	51 (38%)
Refusals	24	29	32	32
Terminated interviews	0	1	0	0
Call backs	12	5	11	19
Total potential respondents	138	119	135	134
Excluded from sample	70	65	73	59
Disconnected	16	12	9	16
Never answered	37	35	56	31
Always busy	4	3	2	1
Business/government	3	—	—	1
Deaf/ language problem	1	—	—	2
Not qualified	9	15	6	8
Total number of calls	208	184	208	193

Phase III: Data Analysis

Weighting: General Public

In order to make valid projections to the entire population of the United States, our sample should match the total U.S. population on key demographic variables.[1] Due to sampling fluctuations, it was necessary to weight our data to match Census figures on four characteristics: age, ethnic origin, gender, education. The overall success of the weighting can be judged from the accompanying table. The final weighted sample matches Census figures very closely.

A final adjustment was applied to produce a total weighted sample size of 1310. In this report, unless otherwise noted, all figures for the general public were obtained from weighted data. The business and environmental samples were not weighted on demographic characteristics.

1. U.S. Bureau of the Census. *Statistical Abstract of the United States: 1981*. Washington, D.C., 1981.

Distribution of General Public Sample on Key Demographic Variables

	Unweighted	Weighted	Census
	%	%	%
Education			
Not high school graduate	15.9	31.6	30.4
High school graduate	35.1	38.2	38.3
Some college and beyond	48.9	30.0	31.3
Age			
18-24	15.9	19.2	18.1
25-34	29.6	22.6	22.8
35-49	27.0	20.8	22.6
50-64	18.0	20.3	20.6
65 and over	8.9	16.3	15.7
Ethnic Origin			
White, Hispanic, other	89.0	87.9	88.3
Black	9.1	12.0	11.7
Gender			
Male	37.6	48.8	49.0
Female	62.3	51.2	51.0

Sampling Distribution

Data collection techniques ensured that the randomness of the telephone number selection process was maintained. The random selection process is required to gain access to probability theory to measure the sampling error for proportions reported in this study.

The normal approximation of the 95% confidence limits for the dichotomized percentage results of the sample may be computed as follows:

$$\text{Sample Confidence Limits} = p \pm \left[1.96 \sqrt{\frac{p(1-p)}{(n-1)} + \frac{1}{2n}} \right]$$

where p is the percentage result divided by 100, and n is the sample size, excluding missing data.

A table of the estimated sampling error for binomial percentage at the 95% confidence level is reproduced below.

Estimated Sampling Error For Binomial Responses

(95% Confidence Level)

Sample Size	50/50	60/40	70/30	80/20	90/10
100	10.0	9.8	9.2	8.0	6.0
200	7.1	6.9	6.5	5.7	4.2
300	5.8	5.7	5.3	4.6	3.5
400	5.0	4.9	4.6	4.0	3.0
500	4.5	4.4	4.1	3.6	2.7
600	4.1	4.0	3.7	3.3	2.4
700	3.8	3.7	3.5	3.0	2.3
800	3.5	3.5	3.2	2.8	2.1
900	3.3	3.3	3.1	2.7	2.0
1,000	3.2	3.1	2.9	2.5	1.9
1,500	2.5	2.5	2.3	2.0	1.5
2,000	2.2	2.1	2.0	1.8	1.3

The sample sizes used in calculating margins of error will be smaller for subgroups than for the total sample. The following table shows the number of respondents in each of the key subgroups.

Unweighted Sample Sizes of Key Subgroups

	Number of Respondents
Gender	
Male	492
Female	815
Age	
18-24	208
25-34	388
35-49	354
50-64	235
65 and over	116
Ethnic Background	
White	1124
Black	119
Hispanic	41
Education	
8th grade or less	58
Some high school	141
High school graduate	459
Some college	341
College graduate	298

	Number of Respondents
Region of the Country	
Pacific	174
Mountain	66
West South Central	135
Middle South	73
South Atlantic	201
New England	186
Middle Atlantic	73
Middle West	269
North Central	123
Growth Orientation Continuum	
1. Resource utilization	199
2.	379
3.	370
4. Resource preservation	361

These sample sizes apply to all cross tabulation tables with the exception of measures of work involvement. Since questions about work were asked only of those who were employed, the sample sizes for work cross tabulations are generally half the sample sizes.

Division of respondents by region of residence was performed according to the scheme used by the U.S. Census Bureau (*Statistical Abstract,* 1981). The regions were as follows:

Pacific: California, Oregon, and Washington.
Mountain: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming.
West South Central: Arkansas, Louisiana, Oklahoma, Texas.

Middle South: Alabama, Kentucky, Mississippi, Tennessee.
South Atlantic: Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia.
New England: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont.
Middle Atlantic: New Jersey, New York, Pennsylvania.
North Central: Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota.
Middle West: Illinois, Indiana, Michigan, Ohio, Wisconsin.

Statistical Analyses

The bulk of analyses reported in the text are illustrated with cross tabulation data. In addition to examining these tables, a number of other procedures were employed to uncover relationships among the variables studied: three-way cross tabulations, reliability procedures, factor analyses, analysis of variance, partial correlations, regression analyses.

Conclusions about the predictive power of various factors are made by taking into consideration all of these criteria. No single criterion is considered sufficient to establish a clear association between two variables.

The Growth Orientation Continuum

The Growth Orientation Continuum is based on the work of Riley E. Dunlap and Kent D. Van Liere. Drs. Dunlap and Van Liere developed this list of six items from a larger version of their scale. A detailed discussion of the methodology used for this scale can be found in the *Journal of Environmental Education*, Volume 9 (Summer, 1978): 10-19.

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Free Enterprise

Do you agree or disagree with the following statements:

An incentive for private profit is necessary in order for an economic system to function efficiently.

	%
Strongly agree	39
Somewhat agree	40
Somewhat disagree	10
Strongly disagree	4
Don't know	7
(Number of respondents)	(1310)

Regulation of business by government usually does more harm than good.

	%
Strongly agree	32
Somewhat agree	38
Somewhat disagree	18
Strongly disagree	6
Don't know	6
(Number of respondents)	(1310)

The less the government has to do with the American economy, the better off the country will be.

	%
Strongly agree	22
Somewhat agree	30
Somewhat disagree	27
Strongly disagree	13
Don't know	8
(Number of respondents)	(1310)

The United States would be better off if it moved toward socialism.

	%
Strongly agree	5
Somewhat agree	15
Somewhat disagree	23
Strongly disagree	49
Don't know	8
(Number of respondents)	(1310)

The profits of big business should be controlled by government.

	%
Strongly agree	14
Somewhat agree	22
Somewhat disagree	28
Strongly disagree	31
Don't know	5
(Number of respondents)	(1310)

Public Concern for the Environment

I am going to read several statements referring to the relations between humans and the natural environment. For each statement, would you tell me how you feel about it—do you "strongly agree" with it, "agree" with it, "disagree" with it, or "strongly disagree" with it?

Pollution is one of the most serious problems facing our nation today.

	%
Strongly agree	16
Agree	44
Disagree	30
Strongly disagree	8
Don't know	2
(Number of respondents)	(1310)

The balance of nature is very delicate and easily upset by human activities.

	%
Strongly agree	37
Agree	47
Disagree	11
Strongly disagree	5
Don't know	0
(Number of respondents)	(1310)

The earth is like a spaceship with only limited room and resources.

	%
Strongly agree	24
Agree	52
Disagree	17
Strongly disagree	7
Don't know	0
(Number of respondents)	(1310)

We must prevent any type of animal from becoming extinct, even if it means sacrificing some things for ourselves.

	%
Strongly agree	30
Agree	49
Disagree	16
Strongly disagree	3
Don't know	2
(Number of respondents)	(1310)

I feel that American beliefs and values have been a basic cause of our present environmental problems.

	%
Strongly agree	14
Agree	58
Disagree	19
Strongly disagree	4
Don't know	5
(Number of respondents)	(1310)

Economic Growth and Environmental Concern

There is a lot of talk these days about what the goals of this country should be, and I'm going to read a list of possible goals. For each one would you tell me what priority you feel it should receive as a national goal: high priority, medium priority, low priority or no priority?

Maintaining a strong economy.

	%
High priority	81
Medium priority	15
Low priority	1
No priority	1
Don't know	2
(Number of respondents)	(1310)

Maintaining a high rate of economic growth.

	%
High priority	46
Medium priority	43
Low priority	7
No priority	2
Don't know	2
(Number of respondents)	(1310)

Trade-off Questions

Often it is difficult for a nation to accomplish all of the things its citizens want, and it becomes necessary to emphasize one goal over another, although they both may be desirable. I am going to read several pairs of possible goals, and for each pair would you tell me which of the two you feel should have priority.

In the area of land use: Leave parts of our country in their natural states, untouched by man, OR use whatever land is needed to obtain the resources we need.

	Natural State	Use Land	Both/ Don't Know	(Number of Respondents)
	%	%	%	
General public	65	28	7	(1310)
Top executives/ Small corporations	50	39	11	(177)
Top executives/ Large corporations	47	39	14	(86)
Environmentalists	95	2	3	(343)

In the area of environmental cleanup: An emphasis on environmental cleanup first, even if companies have to charge more for their products and services, OR an emphasis on keeping prices lower.

	Cleanup	Lower Prices	Both/ Don't Know	(Number of Respondents)
	%	%	%	
General public	60	35	5	(1310)
Top executives/ Small corporations	59	24	17	(177)
Top executives/ Large corporations	51	26	23	(86)
Environmentalists	93	4	3	(343)

In the area of automotive fuel: Continue to build vehicles which use only low-lead gasoline, reducing air pollution, OR permit the building of vehicles that use lower-cost fuels which pollute more.

	Low Lead	Lower Cost	Both/ Don't Know	(Number of Respondents)
	%	%	%	
General public	79	16	5	(1310)
Top executives/ Small corporations	74	12	14	(177)
Top executives/ Large corporations	77	9	14	(86)
Environmentalists	93	4	3	(343)

In the area of transportation: Funds for public transportation systems like buses, subways, or railroads, OR funds for highways used by private vehicles.

	Public Transport	High-ways	Both/ Don't Know	(Number of Respondents)
	%	%	%	
General public	60	36	4	(1310)
Top executives/ Small corporations	56	32	12	(177)
Top executives/ Large corporations	69	22	9	(86)
Environmentalists	93	3	4	(343)

Jobs, Energy and the Environment

In the area of environmental protection and jobs: Maintaining air pollution standards as they are even if some factories close as a result, OR relaxing air pollution standards to allow factories to stay open.

	Maintain Standards	Relax Standards	Both/ Don't Know	(Number of Respondents)
	%	%	%	
General public	55	38	7	(1310)
Top executives/ Small corporations	39	47	14	(177)
Top executives/ Large corporations	34	40	26	(86)
Environmentalists	84	7	9	(343)

In the area of energy production: Relax environmental protection regulations to increase energy production, OR maintain environmental protection regulations even if it slows the production of more energy.

	Maintain Standards	Relax Standards	Both/ Don't Know	(Number of Respondents)
	%	%	%	
General public	56	35	9	(1310)
Top executives/ Small corporations	36	53	11	(177)
Top executives/ Large corporations	24	62	14	(86)
Environmentalists	86	9	5	(343)

Age, Education, Income and Region of the Country

Age	18-24	25-34	35-49	50-64	65 and Over	(Number of Respondents)
	%	%	%	%	%	
Pacific	24	21	20	18	17	(168)
Mountain	15	23	26	15	21	(61)
West South Central	18	36	19	16	11	(125)
Middle South	20	16	29	16	19	(79)
South Atlantic	24	18	18	24	16	(221)
Middle Atlantic	20	18	19	25	18	(175)
New England	13	22	25	25	15	(77)
Middle West	19	26	20	18	17	(259)
North Central	17	27	20	18	18	(116)

Education	8th Grade or Less	Some High School	High School Graduate	Some College
	%	%	%	%
Pacific	11	21	33	20
Mountain	0	30	38	13
West South Central	12	19	39	13
Middle South	12	26	41	10
South Atlantic	11	28	32	16
Middle Atlantic	5	25	42	15
New England	8	17	43	16
Middle West	8	22	43	15
North Central	9	19	39	15

	College Graduate	Don't Know	(Number of Respondents)
	%	%	
Pacific	15	0	(168)
Mountain	19	0	(61)
West South Central	16	1	(125)
Middle South	10	1	(79)
South Atlantic	14	0	(221)
Middle Atlantic	13	0	(175)
New England	16	0	(77)
Middle West	12	0	(259)
North Central	18	0	(116)

Age, Education, Income and Region of the Country

	Under $10,000	$10,000-$15,000	$15,001-$25,000	$25,00 $40,000	Over $40,000	(Number of Respondents)
	%	%	%	%	%	
Pacific	23	18	25	21	13	(155)
Mountain	13	24	28	25	10	(53)
West South Central	21	17	31	23	8	(115)
Middle South	29	15	37	10	9	(70)
South Atlantic	28	20	25	18	9	(204)
Middle Atlantic	18	24	25	27	6	(157)
New England	18	16	28	27	11	(67)
Middle West	22	19	26	23	10	(239)
North Central	27	11	33	24	5	(108)

Regression Analysis

Dependent Variable: Growth Orientation

Variable	Beta	F
Age	-.22	56.2
Education	.23	59.7
Religious commitment	-.14	22.3
Population density	-.01	4.0
Income	-.02	0.5

Total $R^2 = .16$